THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

☞ The Index and Title-page to this volume of The Cultivator, will be forwarded to subscribers about the middle of the present month.

A WORD TO OUR FRIENDS.

OUR subscribers are requested to bear in mind the fact that "THE CULTIVATOR" is published on the cash system; and consequently that it will hereafter be sent only to such as have paid for the next year. Those therefore who wish the next vol. (commencing on the first of Jan.) should at once renew their subscriptions by handing their dollar to the Agent or Postmaster.

With this number we send out Prospectuses for the next vol. to our Agents, upon whose public spirit and activity we must rely, as heretofore, in a great degree for our subscription; and we hope very many of our present subscribers who have not heretofore interested themselves in obtaining subscribers, will deem the matter of sufficient public importance to induce them to render their aid by exerting their influence to extend the circulation of "THE CULTIVATOR" in their respective neighborhoods. We should indeed be glad to have every one of our friends act as Agents, and for any efforts they may be pleased to make in our behalf, they will receive our hearty thanks. (See Address to Patrons in next column.)

ILLUSTRATIONS.—With the first number of our next volume, we shall issue an extra page of Illustrations, executed in a style superior to any thing which has yet appeared in our paper. It will contain a portrait of Mr. Prentice's splendid bull "Fairfax," to which was awarded the first prize of the N. Y. State Ag. Society at its late Fair, as the best two year old bull, and also the first prize of the American Institute, as the best bull over two years old—the elevation and plans of a Farm House, for the beautiful and highly finished Drawings of which we are indebted to T. M. Niven, Esq., Newburgh—several Farm Implements—drawings of the beautiful Sun Dial, cut in free stone by Mr. Thom, and Mr. Mott's Vase, which were exhibited at the late Fair of the American Institute; an ornamental Gate—a new Bee Hive by Mr. Weeks of Vermont, &c. &c.

THE NEW-YORK STATE AG. SOCIETY.

THE annual meeting of the New-York State Ag. Society will be held at the Lecture Room of the Young Men's Association, in the Exchange, Albany, on Wednesday the 18th day of Jan. 1843, at 9 o'clock, A. M.

Meetings of the Executive Committee will be held at the office of "The Cultivator," on the second Wednesdays of December and January, at 10 o'clock, A. M.

☞ All persons intending to compete for the premiums on Field Crops, are reminded that the statements required must be transmitted to the Recording Secretary, free of postage, on or before the first of Jan. next. The Essays, specimens of Painting and Engraving, and designs for Farm Buildings, intended to be offered for the premiums of the Society, must also be left with the Recording Secretary previous to the first of Jan. next. LUTHER TUCKER,

Albany, Dec 1, 1842. Rec. Sec'y.

TO THE PATRONS OF THE CULTIVATOR,

And the Friends of Agriculture in the United States.

THE present number closes the Ninth volume of the Cultivator, and we are unwilling to permit the occasion to pass away, without tendering our acknowledgments to our numerous friends and patrons, who have kept us company through the year;—those who have so effectually aided us as contributors;—and those who have so kindly assisted us in extending the circulation of our Journal. It has been a subject of gratulation to us, that notwithstanding the hardness of the times, and the multiplication of the new Agricultural journals, so few of our former patrons have left us; while the additions of new subscribers from our own and other states and territories of the Union, prove that our efforts are not without the decided approval of the friends of improved agriculture every where. To our subscribers, and indeed the agricultural public generally, the course and character of the Cultivator is too well known to render necessary a word of explanation or comment; but as there may be some unacquainted with the work, the following particulars are stated for their benefit.

1. The circulation of the Cultivator is greater than that of any other Agricultural journal in the United States, and probably greater than that of any similar journal in the world. It presents in this respect, a most favorable medium through which practical and experienced farmers can communicate their opinions, practice, and experiments, to their agricultural brethren.

2. In the number and high standing of its contributors, both as farmers and as men of science, the Cultivator is without a rival. This will be seen by an examination of the list of contributors to the present volume, or that given with the volume of 1841. It is to the scientific acquirements of many of these contributors, the thorough practical acquaintance with agricultural pursuits possessed by most of them, and the general intelligence of all, that the Cultivator is much indebted for the favor with which it is viewed by all classes in the country. With contributors from every state and territory in the Union, and from the British provinces, as well as several of distinguished merit from abroad, it is not surprising that the Cultivator should have come to be considered as the best exponent of American Agriculture, both at home and abroad.

3. The quantity of matter furnished in the Cultivator, is altogether greater, indeed nearly double that of any other journal in the country, published at the same price. As an easy illustration of the quantity of reading it contains, we will select for comparison, a work with which most are familiar—the North American Review. A careful examination shows that each number of the Cultivator contains as much matter as 145 pages of the Review; in other words, a volume of the Cultivator is equal to three and a half volumes of the Review; the one costing one dollar, the other eight dollars seventy-five cents. A similar comparison might be instituted with other periodicals, but it is unnecessary.

4. In the number, variety and excellence of its illustrations, the Cultivator is unequaled. This department is attended with great expense, but as its adoption has given general satisfaction, it will be continued and improved to every reasonable extent.

5. In the mechanical execution, the quality of the paper used, and the adaptation of the journal to preservation and binding, it is such as to give it a favorable claim to the consideration of the public. Stereotyped as the work is, any number or volume wanted, can be furnished at once, and the increasing demand for the entire series, proves that the Cultivator is beginning to be considered not only the cheapest, but the best Encyclopedia of Practical Agriculture, existing.

The readers of the Cultivator will not expect or require any pledges or promises of the conductors as to the future. They are aware that no effort will be spared in any department of the paper, to fully sustain the high character it has acquired, and render it a welcome visitor in the family of every friend of Agriculture and Horticulture in the country. Devoted, as it has been, to the improvement of the soil and the mind—to the extension of agricultural knowledge and an improved husbandry—and to a better taste in farm management, and farm architecture—such it will continue to be, but with enlarged and more efficient means of usefulness.

It has been the endeavor of the conductors of the Cultivator, to place it on such a basis that they might furnish it to agents, and those disposed to take an interest in its circulation, on such terms as to give them a reasonable compensation for such time and trouble as may be required, and they are happy in the belief that they have, to a considerable degree, succeeded in doing this. These terms they wish every friend to the agricultural interests of our country to examine, and act as inclination or a sense of duty shall dictate.

The conductors of the Cultivator are anxious to extend, or even double the present circulation of the paper, because they believe that the best interests of the country would be promoted by such a result. But in doing this, they do not wish to interfere with, or occasion the loss of a single subscriber by any other agricultural journal. The field of labor before us is a broad one; and to all who are engaged in cultivating it, they cordially tender the right hand of fellowship, and wish them every success. There cannot be in the United States, less than two millions of families who would be benefited far beyond the expense, by the receipt of an agricultural or horticultural paper. How many such journals are circulated? One hundred and twenty thousand, it is believed, would be a large estimate. It cannot then be doubted that there is ample room for the labors and for an extension of the circulation of all.

In bringing their paper to the notice of the agricultural public, the conductors must rely, as they have hitherto done, on the kind offices of the friends of agriculture throughout the United States. To Postmasters generally, and to those Editors with whom we exchange, as well as many others, our thanks are due for the essential aid they have rendered us. That it will still be continued, they cannot permit themselves to doubt. Judging from the experience of the past, and certainly in accordance with our anxious wishes and expectations, the commencement of another volume will find us in the company of most of our present subscribers; and if each of these would endeavor to introduce us to a new friend, as constant as themselves, they would greatly enhance the obligations we feel to them personally.

IMPROVEMENT IN THE CULTURE OF COTTON.—We publish in this paper the first of a series of three numbers on the Culture of Cotton, from the pen of Dr. CLOUD of Alabama, which, if we mistake not, will be of high interest to cotton planters. In a private note, dated Oct. 12, Dr. C. says—"I am this season absolutely raising from 3,000 to 5,000 lbs. of cotton per acre under the improved system, when the same land, under the system at present practiced throughout the cotton region, could not possibly yield above from 300 to 500 lbs. per acre, and with but a trifling shade of difference in the expense." In a later letter, Dr. C. informs us that he has actually picked 5,989 lbs. per acre.

CORRECTION.—The grass mentioned in Dr. Cloud's article, p. 161, should have been printed *Musquite* instead of *Musquito* grass.

☞ We beg to call the attention of the scientific and agricultural public to the advertisement of Messrs. Tagliabue & Casella, philosophical instrument makers, London, which appears in another column. They are the principal and oldest established real implement makers in the United Kingdom; and the newly invented rain guage which they have brought out is highly commended by the Meteorological Society of Great Britain, and now much in use by all interested in the fall of rain. Their other instruments for registering meteoric phenomena are also highly approved.

AMERICAN SILK.—To Mr. Salmon Higgins of Ithaca, N. Y., was awarded a gold medal for the best specimen of raw silk exhibited at the late Fair of the American Institute. This beautiful specimen of silk, made in the family of Mr. Higgins, was, as we learn, sent to the Fair of the State Ag. Society for exhibition; but for some reason, unaccountable to us, it appears to have been removed after having been opened for exhibition; so that it is supposed it was not seen by the judges who examined the specimens of silk.

SALE OF STOCK.—Col. J. F. Scribner of Sheldon, Vt., who has, as we are informed, a very superior flock of South Down sheep, from importations by way of Quebec, recently purchased two superior buck lambs of the same breed (one weighing 108, and the other 112 lbs.) of Mr. Bement of the Three Hills Farm. Mr. B. has also lately sent a buck and two ewes, of the same breed, to our friend Capt. R. S. Hardwick of Sparta, Ga.—a buck and four ewes to Wm. Sumner, Esq. Pomaria, S. C.—three Durham calves, a bull and two heifers, to John Warren, Esq., Columbus, Ga. These calves were sired by his famous and well-known Astoria, which we regret to hear, he has been so unfortunate as to lose, after only 24 hours illness. To Mr. John Bonner of White Plains, Ga., Mr. B. has recently sold the beautiful pair of Berkshires, which received the first prizes at the Syracuse fair.

Notices of New Publications.

NATURAL HISTORY OF NEW-YORK:—*Part* I. *Zoology, by James E. DeKay.*

We have before us the first of the volumes resulting from the scientific survey of the state which has been several years in progress; and can say that it is in all respects worthy of the men whose labors the series is designed to record, and to the state whose munificence has thus far so successfully carried this great work forward towards its com pletion. The volume before us consists of two parts; the first, an introduction from the pen of GOV. SEWARD, and the second the Report on the Zoology of the State, or a History of all the known animals of the State, prepared by the Zoologist of the Survey, Dr. J. E. De Kay.

The "Introduction" occupies about 200 pages; and is a comprehensive and beautifully written essay, on the past and present condition of the state, embracing all its various and extensive interests, and presenting at a single view a mass of historical facts, interesting to all, and rarely to be met with in an accessible form. Among the subjects treated by Governor Seward, we find the constitution of the state; its colleges and academies; libraries; school system; school libraries; newspapers; religion; medicine; jurisprudence; penitentiary discipline, (a well written note by Mr. Sullivan;) canals; railroads; physical sciences; agricultural improvement; horticulture; civil engineering; Croton aqueduct; architecture; coast surveys; historical and other writers; natural history; geological survey, &c. &c.

The part devoted to the labors of Dr. De Kay contains, 1st, a well written preface showing what had been done by others, and the course pursued by the writer in illustrating this important branch of natural history. 2d. A tabular view of the Genera of Mammalia observed in the State of New-York. 3d. A description, scientific and popular, of all the animals embraced in this series. And 4th. A series of thrty-three finely executed plates, embracing figures of all the animals described as existing within the limits of the state.

A critical examination of the Zoology we are compelled to leave to others, our limits only permitting us to say that to those wishing to become acquainted with the mammalia of New-York, their character, habits, &c. Dr. De Kay has furnished a most satisfactory guide. The engravings add greatly to its value, and the descriptions embrace information of much use to the agriculturist as well as others.

The Scientific Survey of New-York is one, the progress of which we have watched with great anxiety, as constituting, so far as its natural history is concerned, an important era in the history of New-York. Its execution thus far has been most honorable to the men who conceived it, those who have superintended and assisted in the execution, and to the state whose liberality has furnished the means of its performance. The volumes which record the results, will long remain a proud monument of the liberality, science, and mechanic skill of the present times; and those who have had the pleasure of examining the present magnificent volume, will wait with no little impatience for the appearance of those which are to follow it. Of these, it is understood there will be some five or six in number. The present, is a large quarto, beautifully executed at the press of Thurlow Weed, printer to the State, well bound, and sold at four dollars. This is one of those works which no public library, and few private ones, can afford to be without. The whole will be executed at the expense and under the superintendence of the state.

JOURNAL OF ARTS AND SCIENCE.—*Professor Silliman, New-Haven, Ct.*

The October number of this always welcome periodical, is received, and a hasty examination has shown us that it contains several papers of much interest. The history of geology, as given in the address of Prof. Silliman, will be read with interest by all who are wishing to become acquainted with this science. There are two papers on tornadoes, one by Mr. Redfield of N. Y. and the other by Prof. Loomis of Hudson, Ohio. We think they establish the whirling character of most if not all tornadoes most conclusively. There is a brief bibliographical notice of Prof. Liebig's new work, by the editors, in which an opinion highly favorble to the work is expressed. They say, "The views of Prof. Liebig, founded on the incontrovertible evidences of numerous analyses, cannot be gainsayed." "It is a most lucid condensation of years of laborious research, not of the author only, but of all his contemporaries." The miscellaneous notices are very valuable. That respecting the production of insects, by prolonged electric action, will arrest attention.

NORTH AMERICAN REVIEW. *Boston.*

The October number of this periodical is before us with its usual compliment of good things. College Education, is a capital paper in the form of a review of Pres. Wayland's work on our present collegiate system. It tells plain truths, in a manner that should make them heard. Field Sports, is a comparison of the game offered sportsmen in this country and in Great Britain; and will be acceptable to those fond of such pursuits. The paper which will attract most notice from men of science, is a review of Liebig's late work on Animal Chemistry. On some points it is quite severe on the philosophy of the great German; partiparticularly on that part relating to physiology and pathology. We apprehend, however, that it will be found easier to cavil at, than confute, Liebig's positions on these topics. As soon as we can make room, we shall present a notice at some length of such topics in this work as properly belong to our publication. There are other papers of interest, particularly a caustic one on the plunderings of some of the English reviews, in which the question, "Who reads an American book?" is answered in a good natured but conclusive way.

PHENOMENA AND ORDER OF THE SOLAR SYSTEM.—*Dayton & Newman, 199 Broadway, New-York.*

We are indebted to the publishers, Messrs. Dayton and Newman, for a copy of this interesting and instructive volume, from the pen of J. P. Nichol author of "Views of the Architeciure of the Heavens." The work is illustrated with numerous plates, exhibiting some of the most striking appearances in the planetary and solar system. This is one of those volumes which should find a place in every Family and every School District Library. The reading of such works gives a healthy tone to the mind, and enlarged conceptions of the skill of the architect of the universe. They teach the minds of the young to look through nature up to nature's God.

UNCAS AND MIANTONOMAH.—*Dayton & Newman.*

This is another volume from the same publishers as the above. The basis of it is an address delivered by Col. Stone of New-York, at Norwich, Conn., on the occasion of the erection of a monument to the memory of Uncas, that distinguished chief, and friend of the first settlers of Connecticut, July 4, 1842. Those who have read Col. Stone's Life of Brant, or of Red Jacket, will need little persuasion to induce them to peruse this brief record of the chief who did so much to aid and succor the hardy pioneers who raised the standard of religion and civilization on the banks of the Connecticut. Col. Stone seems at home among the Indians of North America, and his record of facts, relating to those times, and the principal actors in them, cannot fail of being read with interest.

Answers to Inquiries, &c.

IMPROVEMENT OF THE SOIL.

MESSRS. EDITORS—I am about to commence farming on a small scale. I have purchased an acre of land a few minutes walk from my office, on which I intend to reside, and bestow my leisure moments in cultivation. I am anxious to make it as productive as possible in vegetables and fruit,—let me then tell you my plans.

My grounds are a mixture of dark loam and sand, with a subsoil of yellow clay. I propose to dress it with 50 loads of good stable manure, 50 barrels of charcoal dust, and 25 bushels of shell lime. Previously to spreading them, I shall plow the land to the depth of 10 inches, and at the same time subsoil plow to the depth of 18 or 20 inches; harrow thoroughly, and spread the manures, then cross plow and harrow again. Is this a judicious course, or can I add for a more permanent fertilizer, bone dust? If not bone dust, what, and how much, of any thing else? A. P. C.

New-York, Oct. 1842.

The plan proposed by our correspondent, is an excellent one, and if carried out, can scarcely fail of success. One thing only may be necessary—if the subsoil is moist, under draining would make it much more suitable for fruit trees; if not moist, subsoil plowing will be all that is necessary. Bone dust can scarcely be considered a permanent fertilizer; its effects are great, but immediate; and the manures he proposes will equal any thing else for such a use. Charcoal is useful in several ways—it makes the soil warmer, it renders it more porous and friable, and it absorbs and treasures up the ammonia of the manure and the air for the use of the plants. For a first dressing, the materials named will be abundantly sufficient.

CULTIVATION OF THE OLIVE, &c.

MESSRS. GAYLORD & TUCKER—A writer in the Sept. No. of the Cultivator, from Chester co. Pa., has inquired if the Olive could not be propagated in the U. States, in sufficient quantities to furnish Olive oil for our own consumption, and be rendered a substitute for lard or hog oil. This question cannot be answered with certainty; but there is reason to believe that the climate of the U. States is too cold or changeable for the growth of that tree, with the exception of Georgia, Alabama, Mississippi, and Louisiana, and probably limited to the southern portion of these states. In 1819, a grant of land in Alabama, was made by Congress, to some French emigrants, on the express condition of introducing the Olive. The attempt I believe was abortive; the French soldiers, (for these emigrants were soldiers under Napoleon,) as I have understood, abandoning the culture of the olive for that of cotton. There is great reason to believe that the olive might be cultivated in Florida to advantage, if that peninsula shall ever be brought into general settlement, and rendered safe for the pursuits of the husbandman. I think the culture of the olive would be a great acquisition to our agriculture, if the climate of any part of the states will permit its adoption.

Arthur Young mentions in his work on Agriculture, that in his tour in Italy, he found that the sheep in that country, yield milk from which cheese is made in such quantities, as to afford a profit of 18 per cent. Has anything of that kind been attempted in the U. States? and could any thing of the kind be attempted that would render our flocks of sheep more valuable or profitable? Has any attempt been made to cure mutton as *bacon?* Would it not be worth the attention of some of the Ag. Societies in the states, the southern ones particularly, to make a trial of producing cheese from the milk of sheep?

Cambridge, Sept. 1842. WM. JENNISON.

According to Bishop Heber, in his Travels in the Crimea, in the latitudes of from 44° to 46°, there are two varieties of the Olive cultivated there, and have been from time immemorial, which resist the severe frosts of that country, where at times the thermometer falls nearly or quite to zero; and which would be fatal to the olives of Italy, France, or Spain. It is probable if these Crimean Olives were introduced into the Southern states, they would succeed; but present appearances indicate that there will be a greater certainty of success in manufacturing olive oil from pigs than from the fruit of that tree, for a considerable time to come.

BOMMER'S MANURE.

MESSRS. EDITORS—I perceive there is a new method of making vegetable manures by fermentation, invented by Mr. Bommer which is very highly recommended, and it appears from a notice in the N. G. Farmer that the price of the patent is $10, but there is nothing said about the expense of the process, and I am led to think perhaps it is like a receipt which I once bought for making soft soap, very highly recommended, and I got soft soaped in earnest; for to make six gallons, it required four lbs. of hard soap, and other materials from the druggists, which cost as much as six gallons of soap was worth after it was made. If Mr. Bommer's invention is really valuable, and if straw can be so readily converted into manure, it would be of great use in this wheat growing county, and I would suggest that Mr. Bommer would find it for his interest to make the proprietors of the Agricultural Warehouse at Syracuse, agents for the sale of rights.

I should be pleased to learn from you, what is the expense of the process, and how the manure is increased four-fold in weight in the manufacture? Is it by water added, or by something else? A SUBSCRIBER.

Dewitt, Onondaga co.

"A Subscriber," is referred to Dr. Beck's Report on the manure made by Mr. Bommer, on the ground occupied by the State Society, at their late Fair at Albany, for an answer to his queries. In that instance, straw, corn stalks, swamp grass, weeds, &c. was converted into a capital manure in 15 days. The expense will of course depend on circumstances, but in no instance can it be great. The weight gained is partly from the water added, and partly from other materials, none of which are expensive, and some of which of little or no value before, are converted into first rate manure during the process. It will be seen from Mr. B.'s notice in our last paper, that it is his intention to establish agents for the sale of his method, in the different counties.

MANURE, AND LOCUST FENCE.

"W. P." of Darke Co. Ohio, requests "some information on the best methods of preparing and increasing the quantity of manure; and whether Black Locusts can be planted in any way to make a fence, or posts for a fence?"

The first part of our friend's inquiry, will be found answered in the reply to the inquiry of Mr. Carr, and more at length in the preceding numbers of the Cultivator. We have never known the black locust planted for fence, as its manner of growth would prevent that closeness necessary for this purpose. Its durability for posts, is only equaled, when the wood is mature, by the red cedar. In soils suitable for its growth, we see no reason why it might not be planted in rows ten or twelve feet apart, and when grown to the diameter of eight or ten inches, bars of durable wood sprung into holes made in the bodies, the living tree serving for posts, as we have often seen done in the case of the Lombardy poplar; the only use, by the way, to which this tree is fit to be applied.

SOUTHWEST MISSOURI.

OUR correspondent, D. W. THOMPSON, of Jasper, Pleasant Prairie, in the southwest part of the state of Missouri, gives a flattering, and we doubt not, a just account of that section of the United States. The length of his communication, however, obliges us to condense some parts of it. He says:—

"Permit me to say to the readers of the Cultivator, who wish to emigrate, (for we at the far west want not only the readers of your paper, but those too, who practice according to its precepts,) that I think ours possesses many advantages over any with which I am acquainted. Its climate is admirable, (about 37 degrees of latitude,) temperate and healthy; face of the country generally level or rather undulating; the soil very fertile, producing a greater amount and variety of farm products, than almost any other section of our country. More than 40 bushels of wheat per acre have been raised, and from 800 to 1000 lbs. of cotton are produced. There is every probability that rice might be grown with success. Our streams are branches of the Arkansas, small, swift, and clear, rising from and generally fed by springs, neither freezing in winter, or dry in summer, furnishing abundance of water power. The country is populating and improving rapidly, and there has probably been enough grown the present season to support twice the present number of inhabitants. Wheat is 25 cents per bushel, corn lower. For settlers, we wish the enterprising, industrious, temperate and moral class, to come to our country, as for such, it presents strong inducements; and there is much land not yet taken up, while those who choose, can have choice improvements, in some cases lower than they can be made."

Mr. Thompson wishes a young gentleman "that can come well recommended for morality and science," to engage with him for a few years in the introduction of the silk and mulberry culture, and the gardening and nursery business. The experiments made in silk, prove that the country is well adapted to that culture; and the other branches might doubtless be made profitable. Mr. T. thinks the position a good one for the manufacture and sale of dairy products, and is intending to enter upon that business as soon as suitable arrangements can be made. Emigrants, Mr. T. advises, to bring with them all seeds and scions of fruit trees to be found in eastern gardens or nurseries; and in particular, the seeds of the grasses that are hardy, and calculated for good pasture. Of these, however, the Red clover, Timothy, and Red top, may be excepted, as these are found in abundance in that region.

Mr. Thompson asks for the best manner of sowing and harvesting the Yankee bean, (common field bean we presume,) and whether cultivated grasses can be made to take in the prairie, without first breaking the sod?

The field bean is best cultivated by planting in rows, on moderately fertile soil, rather sandy and light than otherwise, and is to be kept clean with the hoe. When ripe, they only require to be pulled, dried, threshed, and cleaned by the fanning mill, or by being winnowed. The

whole process is perfectly simple and easy. Tame, or cultivated grasses, take on prairie lands without difficulty, if the seeds are sown, and the surface thoroughly harrowed. It is still better, if the prairie can be burned over previous to sowing the seeds, as the surface is then left in excellent condition for the new grasses.

THE CRANBERRY.

"A SUBSCRIBER," at Poughkeepsie, asks whether the Cranberry (or Cranberry,) can be grown from seed; whether there are two kinds of the plant, and where, if they cannot be grown from seed, plants of the right kind can be procured? There are three varieties of the cranberry, two in the northern states, and one in the south, but with the exception of the common kind, the others are so rare as not to be of any account. All are creepers, natives of wet places, and may be grown wherever the soil is damp and abounding in vegetable matter or muck. The best method of procuring them, would be to select them at once from fruit bearing cranberry meadows, and they may be transplanted either in spring or fall, as may suit convenience. We have never known their being cultivated from seeds, though the thing is doubtless possible.

SILK MANUFACTURES, SHEEP, &c.

MR. A. E. ERNEST of Bibb co, Geo., informs us that for several years past, he has been experimenting in the culture of silk, and has been eminently successful. He proposes to extend his operations, and wishes some information as to the best machinery for converting cocoons into sewing silk. If some of our friends who have a practical acquaintance with the different machines, reels, &c. in use, such as the Piedmont, Brooks', Jones', Blydenburgh's, Clarke's, or others, will state their opinion of the best for making sewing silk, with the price, and the place where they can be procured, they will confer a favor not only on Mr. E., but on others who are engaged in the silk business.

Mr. Ernest asks what kind of fine wooled sheep would probably suit that climate best, and at what rates fine wooled sheep can be procured?

Sheep derived from a warm country, would doubtless do better in the climate of Georgia, than those from a northern one; and for this reason, the Merino, or the Saxon, or some of their varieties, should be chosen. The South Down is a hardy sheep, and would probably succeed well in Georgia, or elsewhere; but the wool, although of good quality, is not equal to Merino in fineness. The pure Merinos or Saxons may be procured, ewes and rams, at from six to ten dollars each; and the South Downs from fifteen to twenty-five dollars each.

The closing remarks of Mr. Ernest's paper, contain so much truth and good sense, that we are unwilling to withhold them from our readers:

"The condition of our country certainly requires that we should all be doing what we can to relieve it from its present unhappy state. The distresses of the country have clearly been brought about, by consuming more than we have produced; and it can be relieved by producing more than we consume, and in no other way. It is folly, or worse than folly, to expect relief in any other way. No single individual can do much, but each one can do something. Any person can in themselves furnish an example of industry and economy, if they will, and this is precisely what is wanting. If I can throw $1,000, or $10,000 worth of silk into market every year, I shall do something; and so with any other of our products. The contributions of each may be small, but the aggregate is large; and it is productive industry that tells on the nation's prosperity."

GROUND MOLE AND GOPHER.

OUR correspondent, WM. C. CARR, Esq. of St. Louis, inquires for some method of destroying the moles, and the burrowing animal called the Gopher, (peculiar we believe to the country west of the Mississippi.) He says "they are not only highly destructive to orchards, gardens, yards, and meadows, but to corn fields also."

Of the gopher, we know nothing; but the mole or rather meadow mouse, (which we presume is the animal referred to by Mr. Carr,) is in some years very abundant here, and does much damage to orchards, nurseries, meadows, &c. At such times we have found the best method of saving our trees, was to keep them free from grass, weeds, or any thing that could shelter the mouse, around the roots. They may be poisoned without difficulty by scattering poisoned food in their covered pathways, or they may be caught in traps. Mr. Loudon says that in 1815, the extensive plantations of young trees in the forest of Dean, were attacked by such multitudes of mice that their destruction seemed inevitable. After trying various methods to destroy them, without much effect, recourse was had to digging holes for them. The holes were about 20 inches deep, about the same length, but as narrow at the surface as would admit taking the dirt from them, but broad at the bottom, so as to be shelving over on all sides, from the bottom to the top. These holes were made about 60 feet apart each way, over about 4,000 acres, and 30,000 mice were trapped in a few days, and the nurseries saved.

Mr. Carr asks for the best method of preserving stable manure through the summer? It should be heaped under cover, and mixed with swamp muck, peat, or pond mud, to aid in the fermentation, and absorb the gases. The quantity of manure may be doubled in this way, and load for load remain of equal value to the stable manure. Should it not incline to ferment, pour upon the heaps the wash of the yards, or the urine of the stables.

Agricultural Society Meetings.

WE continue from our last No. the notices of these Agricultural holidays, as they have come to our hands, and only regret that we are not able to give more of the flattering proofs of the increased attention paid to Agriculture, and the consequent success attending, they contain. So rapid, however, has been the increase of these Societies, that we can only find a place in our columns for some of the most prominent incidents of each. Our thanks are justly due to the many gentlemen in all parts of our country, who have so kindly forwarded these interesting notices to us. The success which has attended these Societies the present year, is the more gratifying, from the fact, that many of them are new, and the present their first exhibition.

MAINE.

KENNEBEC AGRICULTURAL SOCIETY.—There are not many Societies in this country, more active and efficient than this favorite society of our Maine friends. The Show and Fair this year, came off in fine style, attended by a multitude of spectators, and lots of exhibited animals, and articles of domestic manufacture. The plowing match was well contested, the work beautifully done in the main, and the great number of spectators much gratified. From the reports of the committee on plows, and the plowing match, we have condensed the following particulars. The number of plows entered was seven. The ground was a sandy loam, with patches of witch [quack] grass; the quantity, one-eighth of an acre to each plow.

No.	Team.	Kind of Plow.	Time.	Depth
1.	Seven years old oxen,	Ruggles & Mason,	33 min.	6¾ in.
2.	1 pair of horses,	New plow,	26	6½
3.	1 pair of young oxen,	Doe's plow,	33½	6½
4.	2 pair of cattle,	Doe's plow,	36	7
5.	Horses and oxen, 1 pr. each,	Greenlow's plow,	29½	5½
6.	1 pair horses,	Barnaby & Mooers	26	6
7.	1 pair horses,	Doe's plow,	21	6

The first premium was awarded to No. 1, the plow operating admirably, inverting the sod completely, so as to leave no grass visible. The second premium was awarded to No. 3, between the work of which and No. 1, but little difference could be perceived. The third prize was awarded to the new plow, No. 2. It was well plowed, but not so neatly as the two former. The side hill plow of Barnaby and Mooers' is highly spoken of, particularly for side hill work; though doubts are expressed as to its fitness for level land, when compared with the Ruggles plow. The interest excited by the plowing matches of this year, has furnished abundant proof that the managers of Ag. Societies will do well to pay particular attention to that subject hereafter.

MASSACHUSETTS.

HOUSATONIC CATTLE SHOW AND FAIR.—Berkshire County has two Agricultural Societies, both ably managed, and efficiently supported. That at Pittsfield, was noticed in our last Cultivator; and we have now received the proceedings of the Housatonic Society, which held its Fair at Great Barrington, in the beautiful valley which gives its name to the association. It occupied two days, and the whole proceedings were of the most encouraging kind. A team of 100 yoke of beautiful cattle, attached to a plow held by Col. Fitch, preceded by music, passed through the village, amid the cheers of the multitude assembled. The address was by Mr. MERRIAM, of the Boston Cultivator, and is spoken of as highly appropriate and interesting. One of the noticeable events of the two days, was the first entrance of a train of cars on the Bridgport Railroad, with some 600 passengers, ladies and gentlemen, to attend the Fair. It is estimated that during the two days, not less than 12,000 persons were on the ground, and to the honor of the citizen farmers and mechanics of Berkshire, it should be added, not a drunken individual was observed. No intoxicating liquors were used at the excellent dinner given at the Berkshire House; an example which we hope will be followed by all such associations, as have not already adopted the practice. The reports of the several committees speak well of the animals exhibited, and the crops grown in the country, wheat particularly, which has suffered less from the insect the present year, than for several years previous. The farmers of Berkshire are evidently in the way to prosperity; intelligent and industrious, they have only to go forward.

ESSEX AG. SOCIETY.—There are very few societies, if any, in the country that have done more for the promotion of agriculture than this spirited association, as their well printed and numerous reports fully prove. The last fair came off in October at Andover; and the full attendance of farmers and others demonstrated that the interest felt in its proceedings was not lessened. The agricultural capabilities of this county are great; and the intelligent owners of the soil act as though they intended to make the most of them. The show of cattle of all kinds, horses, sheep, swine, vegetables, fruits, products of the farm and dairy, and of domestic products, was most encouraging and satisfactory. Both horses and cattle were entered for the plowing match, and the work was done in a beautiful manner. Addresses were made at the dinner by the president of the society, the Hon. L. Saltonstall, Hon. D. P. King, Col. C. A. Andrews of Boston, and others. The annual address was by the Hon. A. W. DODGE. It was as such addresses should be—"practical in its details; replete with interesting facts, useful suggestions, and judicious advice." The reports made by those exhibitors who receive premiums are of the right kind, showing how the successful results in their case were obtained, and are thus instructive and useful to others. We shall doubtless have occasion to again refer to them.

PLYMOUTH CO. AG. SOCIETY.—The annual cattle show of this society was held at Bridgwater in October. The day was fine. A large number of the substantial farmers of the county with their wives and daughters were present. The show of cattle, principally native, was good. The plowing match was well conducted; and all the proceedings were conducted much to the satisfaction of those assembled to witness them. The dinner was good, and a number of spirited volunteer toasts were washed down with cold water. The address was delivered by S. BOURNE, Esq. of Wareham. It embodied a number of interesting facts, particularly in relation to the use of ashes in forming compost with peat, swamp muck or mud. Eight bushels of ashes, unleached, were sufficient to mix with a cord of muck, or peat; but if leached, one part of ashes would be required to three of muck. This compost is excellent; and all farmers who can procure the ashes will do well to use them in this way, in preference to selling them to the ash man. It is believed no man, after witnessing the fair at Bridgwater, would be disposed to speak lightly of the farmer, or the agricultural products of old Plymouth.

CONNECTICUT.

NEW-HAVEN CO. AG. SOCIETY.—The fair of this active and useful association was held at New-Haven on the 28th and 29th of September, and exceeded in interest any that have preceded it. About 100 head of fine stock, imported and domestic, were on the ground, with any number of sheep, swine, and some excellent horses. The beautiful Short Horn stock of Mr. Whitney, which had been sent to the N. Y. State Fair at Albany, were much missed. The plowing match came off in fine style, and was attended by several thousand spectators. The quantity of land was one-eighth acre to each team; the shortest time in which the plowing was done was 26 minutes; the longest only 32½ minutes. The plows, with but a single exception, were of bad construction and model; and when it is remembered that experiments prove there is a difference of draft in plows of quite 100 per cent, farmers who have any mercy on their beasts or themselves, should be more careful in getting the best ones. But the great charm of the day for the farmer was the unprecedented show of working oxen. The South Green is a parallelogram of 54 by 21 rods, surrounded by double rows of magnificent elms; and around this green as they entered, they were paraded in the form of a hollow square, reaching 9½ times around the whole area, or making a string of 1⅞ miles. The number of working oxen was 1,026, 513 yoke; and among these were many of the most beautiful animals. There was one pair of twins, deep red, and so near alike in every respect that the owner, Mr. Todd of North Haven, had no means of distinguishing one from the other, except a small black spot of the size of a pea on the muzzle of one. Their great beauty, form, size, and admirable command, excited the attention of all. The address was by Prof. OLMSTED—"On the Right God has given Man over Animals;" and the subject was ably illustrated. The election of officers of the society was held at the State House on Thursday, and Prof. Benjamin Silliman was chosen president, and the Hon. Alfred Blackman secretary.

HARTFORD CATTLE SHOW AND FAIR.—The fair of this rich county in the land of steady habits was held in the city of Hartford the first week of October, and exhibited abundant evidence of the spirit of honorable emulation, which the association in its progress had awakened. 100 yoke of working oxen were on the ground, mostly of the rich deep red that belongs to the Devonshire blood and its crosses, well formed and trained. We have long been of the opinion that no part of the world can show such numbers of fine working cattle as New-England; and the shows of this year have given ample proof of this fact. A bad day will it be for New-England when she substitutes horse for ox labor on the farm, as many other parts of the U. S. have done, where no particular necessity for this course existed. There was a good show of Short Horns, among which the fine stock of Mr. Watson of East Windsor, and Mr. Peck of Berlin, received much notice. Mr. Peck's cows were imported, and were said to be first rate milkers. Of other animals, there were a respectable number on the ground—many of them very fine. The show of fruits, flowers, vegetables and farm products, was good; and that of domestic manufactures gave proof positive of the industry of the Connecticut fair. The show of statuary and paintings attracted much attention; and as opening a new field for the cultivation of the mind and taste, may well be recommended for the imitation of other societies, where the means of making such an exhibition exists. We have received the report of the committee on farms from this society, and shall endeavor to give a synopsis of its valuable contents as soon as we can find room.

THE UNION AG. SOCIETY of Connecticut is composed of the patriotic and spirited farmers of the towns of Farmington, Bristol, Burlington, Southington and Berlin, in the counties of Hartford and New-Haven, and furnishes a striking proof of what zeal and intelligence, aided by a good cause, can perform. We have received the report of the executive committee, and are gratified to learn that the fair of the present year was attended with such marked success. The exhibition of working cattle was such as many societies of far greater limits and pretensions might well be proud of, numbering 244 yokes, a few of them crosses of the Durham, about thirty

full bloods or crosses of the Devon, and the remainder native; by which is understood, breeds of cattle that have been cultivated and bred within the limits of these towns for from 40 to 50 years past. The show of young cattle was unusually fine. The plowing match was well contested, and exhibited some superior specimens of plowing. Many beautiful specimens of domestic manufacture were exhibited, among which the committee particularize a Rob Roy shawl, wholly the manufacture of Mrs. Walker of Southington. They say—"It was a specimen of the useful and beautiful combined, which we have rarely seen among the productions of our fair country women; such an one as the proudest Miss who parades the streets of our cities in the manufacture of a different article,* need not be ashamed to wear." Two beautiful embroidered shawls were also shown. In conclusion, the committee speak with confidence of the benefits of the association and the improvement it has already produced.

CANTON CATTLE SHOW AND FAIR.—We are pleased to chronicle the formation and success of these town societies; as experience proves that they are among the most efficient means of promoting the cause of agriculture wherever they exist. Canton is in Hartford county, Connecticut, and the fair and show was held Oct. 12. The number of animals present was greater than at the former exhibition, and showed a decided improvement in quality and condition. 130 yoke of cattle were on the ground, and a very large number of cows, young cattle, horses, &c. A. G. Mills exhibited a South Down buck, 8 months old, weighing 112 lbs. The show of vegetables and farm products was good, and the specimens fine. As was right, the committee extend a cordial invitation to the ladies to take a part in the next exhibition, and to contribute, by presenting proofs of their own ingenuity and industry, to the interest and usefulness of the association.

NEW-YORK.

CHAUTAUQUE CATTLE SHOW AND FAIR.—The Fair and Show of this Society, was held at Westfield. The proceedings were very spirited; the number of animals on the ground good; the agricultural implements exhibited, numerous and well finished; the Reports on the crops very favorable; the plowing match interesting, and the premiums liberal and numerous. Few counties in the state, have developed their resources more rapidly than Chautauque, and the present Fair can only be considered as an earnest of what she will do in that way hereafter.

DUTCHESS CO. AG. SOCIETY.—The first fair of this rich and flourishing county, one of the most highly cultivated and fertile in the state, was held at Washington Hollow on the 5th and 6th of October, and was in all respects particularly gratifying to the numerous concourse of farmers, and the friends of agriculture present. The collection of stock of all kinds was large; and the variety and excellence of farm products, articles of domestic manufacture, fruits, vegetables, far exceeded the expectations of all. The fine display of farm implements attracted much notice; and the various collections of field and garden vegetables and fruits, presented by Mr. Holbrook of Hyde Park, were admired by all. It was a striking proof of what may be effected by cultivation, when labor is directed by skill and intelligence. A beautiful banner, embroidered on white silk, was presented to the society by the ladies of Washington, with an appropriate motto.

ERIE CO. AG. SOCIETY.—The position of Erie county gives it great advantages; and the enterprising farmers are evidently determined to make the most of their fertile soil, as well as local circumstances; of this, the late fair at Buffalo gave satisfactory proof. The number of fine horses, beautiful Durhams, excellent working oxen, superior specimens of sheep and swine, and the great variety of farm products, domestic manufactures, vegetables, fruits, &c. have rarely been exceeded in any part of the state. For the improvement of the domestic animals of Erie, that county owes a large debt of gratitude to the Messrs. Allen, who, both by importation of choice animals and skill in breeding, have done much for the cause. The distribution of the premiums prove that Mr. Allen's animals are properly appreciated. The fat cattle and the dairy products exhibited, attracted much notice. The present was the second meeting of the society; and the spirit manifested proved that in the encouragement of agriculture, Erie will not be behind her sister counties.

GENESEE CO. AG. SOCIETY.—This society held its third exhibition at Batavia on the 20th and 21st of October. But two towns in the county were unrepresented by either members or articles for exhibition. The first day was devoted to the exhibition; and a very fine one it was. There was a very decided increase in animals, and in articles of domestic manufacture, over any previous exhibition. The second day was devoted to the plowing match which was well attended, but did not go off with so much spirit as last year. But three teams entered. Mr. COLMAN, of the New Gen. Farmer, delivered a very able and excellent address in the new Court House to a large and highly interested audience. Premiums were declared off, and the following officers elected for the ensuing year: president, T. C. Peters, Darien; vice-presidents, John Jenne, Bethany—Erastus Cash, Byron—Elijah Platt, Le Roy—Benajah Benedict, bAlexander--Frederick P. Pindle, Batavia--Isaac N.Stage, bStafford—Wm. McOmber, Alabama—Chester Hannum, Pavilion; rec. sec'y, Edgar C. Dibble of Batavia; cor. sec'y, F. Follett of Batavia; treasurer, Lewis E. Heston of Batavia, and four managers to each town.

*Can it be that this "insinivation" refers to the article called "skeut yarn"? ED. CULT.

We require one thing more at this time, and then we can get along very well until the act rendering aid to agriculture expires. And that is, to place in every school district library the annual volume of the Transactions of the State Society, at the expense of the state. I hope it will be done; and that the legislature at its next session will take early measures to carry out so important and desirable a measure. Nothing will so readily produce a uniformity of thought and increased action as the distribution of those volumes. The way will then be made easy for a thorough organization of every town in the state. By this means, a vast flood of agricultural knowledge will be simultaneously spread through the land; and the young mind will be *irrigated* by a thousand streams of useful knowledge, of the very first importance to the young farmer. T. C. PETERS.

GREENE.—The first exhibition of the Greene Co. Society, was held at Cairo, on the 19th of Oct., and a large concourse of gratified spectators, including a large number of ladies, were present. The number of cattle, sheep, swine, horses, agricultural products, and domestic manufactures, was most respectable; and the animals and articles of superior quality. The address was delivered by J. B. NOTT, Esq. who was introduced to the society in a neat and pertinent speech by A. Marks, Esq. The address was a production of much merit, and received with marked attention and interest. The result of this first effort in this county, is eminently satisfactory, and is we doubt not, the precursor of others still more worthy of the farmers of that county. We scarcely need say, that to the encouragement afforded by the labors and the presence of the ladies, much of the interest of the Fair was owing; and this is a matter which should be every where well considered and understood.

LEWIS CO. CATTLE SHOW AND FAIR.—The first meeting of the Lewis County Agricultural Society was held at Martinsburg on the 18th of October. According to the Lowville Journal, it was well attended, and there was a spirited competition for the prizes. The exhibition of fine animals exceeded expectation, and was thought to equal the exhibitions in other counties where societies have been for years in existence. The address was by Mr. COMSTOCK, one of the editors of the Central N. Y. Farmer, and abounded with good plain common sense remarks. The impetus given to the cause by this first meeting of the society will be felt, and result in adding many members to the society. The spirit of generous emulation excited will exhibit itself at the next annual meeting; and the friends of agriculture in the Black River section of the state have much to hope from the exertions of the Lewis Co. Agricultural Society.

ONTARIO FAIR AND CATTLE SHOW.—The third Fair of this rich and beautiful agricultural county, was held at Canandaigua, on the 18th and 19th of October; and notwithstanding the inclemency of the weather, a great number of the substantial farmers of the county, and the friends of the cause, were present. The first day was devoted to an exhibition of domestic animals, and of these, a greater number, and superior animals, were present, that at any former exhibition. The show of horses in particular, elicited much admiration. The second day was devoted to an examination of domestic products and manufactures; to the plowing match; and to listening to an excellent address prepared by our correspondent, MYRON ADAMS, Esq. of Bloomfield. All the proceedings were of an interesting kind. Twenty-three teams were entered for the plowing match, and the competition, as well as excellence of the work, excited much interest among the large number of spectators. After the address, the Hon. John Greig, was elected President of the Society; Oliver Phelps, Secretary; and J. D. Bemis, Treasurer. There was a general feeling among all present, that in any thing relating to Agriculture, Ontario would be hard to beat.

ORANGE CO. AG. SOCIETY.—The Cattle Show and Fair of this Society, was held at Goshen, on the 12th of October, and was respectably attended by the sturdy yeomanry of that rich county. The number of premiums distributed was large; and the spirit of emulation excited, cannot fail to be favorably felt on the agricultural interests of the county. The show of fat and working cattle on the ground, was good; and that of horses has rarely been exceeded. Some fine sheep and swine were exhibited; and twenty premiums were awarded for agricultural products. The show of butter, did not belie the reputation of the Orange dairies. We give below, a few of the crops which obtained the premiums awarded:

F. J. Betts, best acre of oats, 3 bushels sown, 77 bushels.
J. I. Dolsen, next best acre of oats, 4 bushels sown, 75 bush.
F. J. Betts, best acre of yellow corn, 205 bushels of ears.
S. J. Wait, 2d best acre of yellow corn, 93½ bushels.
J. I. Dolsen, best acre of Mercer potatoes, 360 bushels.
I. B. Sands, 2d best acre of Mercer potatoes, 330 bushels.

In answer to a letter addressed to F. J. Betts, Esq. we have received a statement of the process of cultivation of the fields of corn and oats, on which he received the first premiums above mentioned, which will be published in our next number. He informs us that 205¼ bushels of ears was the average product of the whole field of four and five-eighths acres.

QUEENS CO. AGRICULTURAL SOCIETY.—We copy from the Hempsted Inquirer, the following notice of the first Annual Fair and Cattle Show of this Society. We regret that more ample reports of the cattle and crops were not given, as it is evident that Queens cannot be behind her sister counties in such matters. "Never," says the Inquirer, "within our recollection, were so many people in our village at one time, and never we presume were the visitors better pleased with their visit. The number, size, and beauty of the cattle exhibited, far exceeded our expectations, and were such as to do much credit to the farmers of our county. The show of grain, roots, fruit, &c. though not large, was full as much as could be expected at the first exhibition of the kind, and were very good specimens. The ladies of the county, we were pleased to see, not only honored the occasion with their presence, but a number also contributed towards making it worthy of a visit from all. The display of flowers was very beautiful, though not as large as we had hoped to see. A variety of articles of domestic manufacture were also exhibited."

SARATOGA CO. FAIR.—The Annual Meeting, Fair and Show of this county, was held at Ballston, on the 4th of October. The attendance was good, and the exhibition of animals, products of mechanic skill, articles of domestic manufacture, and farm products, of the most satisfactory kind. Among the proceedings of the Society, we find one relating to the Transactions of the State Society, of which 20 copies were furnished to each County Society. It was resolved, "that the volumes be distributed for the use and benefit of the members of the society, by delivering one copy to some member of the executive committee in each town, upon his giving a proper receipt for its safe keeping, and delivery to the society when required." Some similar measure it will doubtless be advisable for all the County Societies to adopt. The Reports would indicate that the crops the present year, had been very good in Saratoga Co. Some of the premiums were as follows:

Wheat	2 acres,	58 bushels,	2 quarts.	1st prem.		Expense	$20.	
"	2 "	55 "	28 "	2d "	"	"	26	
Corn	2 "	274 "		1st "	"	"	24·37	
"	2 "	206 "		2d "	"	"	22·63	
"	2 "	190 "		3d "	"	"	24·37	

The first and third premiums on Corn, were to the same farmer, W. Wilcox, Esq. of Saratoga. The first premium wheat was raised after barley; the second, on a white clover sod. The second premium on potatoes, was given to W. C. Caldwell, of Saratoga, for a crop of 300 bushels of Merino potatoes, on half an acre.

ST. LAWRENCE CO. AG. SOCIETY.—The cattle show and fair of this society was held at Canton on the 14th of September, and was well attended by the farmers of this large and fertile county. We have only received the list of premiums awarded, but learn that the show of cattle, horses, and other animals, was good; that a respectable number of implements were on the ground; and that the exhibition of miscellaneous products, fruits, peaches, grapes, &c. &c. was quite encouraging. The premiums were ample and numerous, and the result most satisfactory.

SENECA CO. CATTLE SHOW AND FAIR.—The agricultural society of Seneca county held its annual meeting at Waterloo on the 20th and 21st of October. A large number of farmers and others were in attendance. Mr. COLMAN delivered the address. Seneca county has long possessed some excellent horses, and these were well represented at the fair. The number of cattle, sheep, swine, &c. was not large, but some of the specimens were very fine. Mr. Sackett, Mr. Dunlap and Mr. Johnson had some valuable Short Horns on the ground, and a bull of Mr. Dunlap's attracted much notice. Various specimens of farm products, vegetables, &c. were shown of the first quality. Draining tiles were shown, made at Waterloo. They can be afforded at 30 cents per rod, are a half round, and when properly laid, must make first rate drains. Some fine specimens of cloths from the Waterloo woolen factory were exhibited. In the evening a farmer's meeting was held in the C. House, Judge SACKETT presiding, at which various agricultural topics were discussed by the farmers present, and all were much interested in the meeting. It has been lately announced in the western states, that a method of rotting hemp by steam has been discovered, by which the process is completed in a few hours, and the product of a beautiful quality. Some flax was presented at the Seneca fair prepared in the same way, and its appearance indicated that the old method of rotting would be abandoned. Great quantities of flax and hemp might and would be grown in this state, if the processes of rotting and dressing could be simplified, and the cost reduced.

WAYNE CO. AG. SOCIETY.—The cattle show and fair of this county was held at Palmyra on the 5th and 6th of October, and were days of great interest to the lovers of agriculture and horticulture in that section of the state. The show of animals took place on the first day; and in the evening the annual address was delivered by STEPHEN CULVER, Esq. of Newark. The number of cattle on the ground was not far from 100; and among them were some fine pure blood Durhams, as well as mixed blood and native animals. Several fine horses were exhibited; and a pair of three year olds, of the Sampson breed, plowed a quarter of an acre of sward six inches deep in fifty minutes, and took the first prize. The number of sheep and hogs was not great; but a few fine Berkshires were shown, and also some specimens of the Leicester, South Down, and Saxony sheep, that were deservedly admired. The premium for the first milch cow was given to B. Butler of Palmyra. "The cow," says the owner, "came in on the 17th of May, and has given from 16 to 20 or more quarts of the richest milk per day through the season: we have made the last week full two pounds of butter per day from her milk, besides cream for tea and coffee for the family. She has not had a dozen messes this season; but good pasture. No extra care has been taken of her." We have no doubt that Mr. Butler's cow is an excellent one, and his statement is probably correct; but we must agree with

the intelligent committee of awards in this case, that it is very desirable in such matters, to have as little left to *estimate* as possible. The milk should have been measured and the butter weighed, to insure perfect accuracy in all such cases, as this affords the only sure ground of useful results. The specimens of vegetables, fruits, &c. were numerous and excellent. Wayne county is well adapted, from the nature of its soil and the ameliorating influence of Lake Ontario, to the production of fine fruit; and there are few sections of the country that can exceed it in this respect. The show of agricultural implements, and of domestic manufactures was good, and the specimens creditable to the skill and industry of the citizens of the county. A notice of the Premium Crops will be given in our next.

At the annual meeting of Wayne Co. Ag. Society, held at Palmyra, 11th mo. (Nov.) 15, 1842, the following officers were elected for the coming year, viz: Sam'l E. Hudson, president; Stephen Hyde, William R. Smith, Joel Hall, J. A. Miller, R. H. Foster, Wm. Walmsley, John Borrodaile, vice-presidents; C. S. Button, T. Hemmingway, John Baker, P. G. Price, Abm. Fairchild, executive committee; Daniel Kenyon, treasurer; Geo. W. Cuyler, recording secretary; John J. Thomas, corresponding secretary.

The following resolution was adopted, viz:

Resolved, That the executive committee, for the purpose of improving the character and skill of our plowmen, be directed to offer one class of premiums on the plowing match, to such persons only as are under *twenty years of age*.

UNION AG. SOCIETY, GRENADA, MISS.—The first annual meeting of this society, which we cannot doubt is destined to work important benefits for this section of the U. States, was held at Grenada on the 10th of Oct., and was well attended by planters, and others interested in improving the agriculture of the southwest. Resolutions were adopted to hold a fair in September next, and a committee appointed to raise the funds for premiums, and make the necessary arrangements. Some spirited resolutions were introduced on the subject of making an effort in that state to provide the bagging and rope required for packing cotton, and making the shipment direct from the ports of that state, rather than through the New-Orleans houses. The address was delivered by JNO. T. LEIGH, Esq., president of the society, and was an able and instructive effort. There is so much truth in the following remarks, and they relate to a subject so often overlooked on such occasions, that we cannot resist copying them:

"And while upon this subject [economy] let me say a few words about the ladies. They have it in their power, by prudent, orderly and economical management of their household affairs, to add much to the prosperity of their husbands. 'Tis in vain for the husband to strive, unless the wife supports and aids him by performing well her duty in doors. Let a due regard to her husband's situation govern her wants and desires; not to be governed by what other ladies have or do, who may be placed in a better situation in life, or who possibly may, by their extravagance, be reducing their husbands and families to difficulties, and ultimately to ruin—though justice to the ladies compels me to say, they generally in their departments perform their duties better than men. They possess more industry, prudence and economy; and have a more lively sense of duty to the interest of the family. To whom ought the husband to go, in matters of importance, for consultation and advice; pure disinterested advice? To the wife of his bosom. No matter how important the subject; my life upon it, nine times out of ten, he will find her advice the very best he can obtain. She feels she is deeply interested in everything relative to her husband and his affairs; and she advises under the highest responsibility—that of interest and love.

"But, says the bachelor, what shall I do, who have no wife?

"Are you a planter—*get one*. If you cannot get married, quit—quit farming; for no man can succeed well upon a farm without the aid, assistance, advice and comfort of a wife. But mark—*let your wife be a dutiful daughter of a prudent mother*."

Copies of the Cultivator, and some other agricultural papers, were directed to be ordered for the use of the society.

LAKE CO., OHIO, AGRICULTURAL SOCIETY.—The Second Fair of this Society, was held at Painesville, on the 6th of October. The day was unusually fine, and the collection of farmers, and others interested in the cultivation of the soil unexpectedly great. The ox teams from the towns of Madison, Le Roy, Perry, Concord, Mentor, &c. of from 40 to 75 pairs each, were attached to wagons loaded with every variety of agricultural production, and were objects of much interest to the farmer. The display of domestic manufactures was splendid, consisting of articles of silk, carpeting, bed spreads, shawls, and various kinds of net and fancy work. Lake Co. is famous for its fruit, and pears weighing 3 lbs. were shown by Mr. Webster of Mentor. The display of apples, peaches, &c. was truly beautiful. In the Report on crops, the committee state that they had examined no less than 12 pieces of corn, estimated by them to yield from 100 to 120 bushels to the acre, shelled at the time of gathering. The premium on sugar beets was given to a crop of 1,600 bushels to the acre, (60 lbs. to the bushel.) In short, the Fair was decidedly better than the preceding ones, and shows that the right spirit is abroad among the Lake County Farmers.

THE NEW GENESEE FARMER.—We find by the last No. of the New Genesee Farmer, that Mr. COLMAN has become the sole proprietor and editor of that journal, and that the price is hereafter to be one dollar a year, instead of fifty cents, as heretofore. This is right. The laborer is worthy of his hire. We know something about this publishing papers at fifty cents, and have long been aware, that standing *alone*, they cannot be sustained. If not permitted to get rich, the Agricultural editor should at least be allowed to live, and nothing short of a dollar for such papers as the Cultivator or Farmer, will do this.

A FEW QUERIES.

IN the course of the present volume, we have in the best manner we were able, responded to many inquiries proposed by correspondents, and we are always happy to oblige our friends in that way; now we wish the privilege in our turn, to make a few, which each of our readers can answer for themselves.

Have you all things in readiness for winter, for with us at the north, we have several long months of that season before us?

Have you your barns, racks, yards, stables, feeding troughs, &c. in order, that your domestic animals may be well fed and sheltered? An animal kept warm and comfortable requires much less food to keep him in equal condition, than when exposed to the winds, rains, and snows, of a northern winter. If you study economy then, you will see that all is right in these respects.

If your potatoes, turneps, or other roots are pitted or buried, have you examined them to see that they are secure against frost? The best farmers do not cover their roots too deep at first, as they are apt to heat; consequently, they need looking to as the weather grows colder, and if necessary more earth should be thrown upon them. Frozen roots for cooking, or feeding animals, are not the thing.

Is every loose board on your barns and sheds secured? Have you no broken panes in your windows? Look about and see. If you have any of the first, take your hammer and nails, and make all sure at once. If the latter, use some glass and putty forthwith. A broken pane of glass will cost you half a cord of wood at least, during the winter, and give you as many colds as you can desire.

Have you secured your cellar against frost? There is many a man—we will not say farmer, for such are unworthy of the name—who will labor hard through the fall, to get his roots and vegetables into the cellar, and then lose them all by negligence in banking his house, or excluding frost from the cellar. This is miserable policy, and your wife will tell you so, if you will ask her opinion.

Are all your farm implements taken care of, and secured against the weather for further use? Do you think it looks well to see your plow left in the furrow; your cart and wagon in the street; your harrow where it was last used; your hay rack thrown upon the ground with your hay rake, and your chains, axes, and other implements, where it would take a week to hunt them up? Every tool, when you have done with it, should be placed where you can lay your hand upon it at any time, and every implement, where it will be secure from weather. Most farmers suffer much loss annually from neglecting these precautions.

Have you examined all your water furrows and drains, to see that all are clear, and the water flowing where it should? A choked drain or an obstructed water course may do much mischief if let alone during the winter. Surface water is ruinous to many crops, and injurious to all, when long continued. Leave then nothing to chance in these respects.

What preparations have you made for adding to your stock of manures? In your manures is your gold mine, more valuable than any of the Carolina ones; and you should be anxious to increase them accordingly. When you cleaned your yard in the fall, did you cover the whole with muck, or peat, or even loam, to absorb the liquid parts of the manure that so frequently run wholly to waste? Don't be afraid of laying out labor in this way; it is money at compound interest.

Are your children at school? and what have you done to provide for them, and for yourself, the means of acquiring that knowledge so essential to success in life? On this point negligence is a crime; parsimony is ruin. If you are able to do nothing else for your children, you are at least able to secure them a competent education. The state guarantees the means of this; it is for you only to use them. Destitute of education, wanting ordinary intelligence, the man enters upon life with all the chances against him. He may succeed; but the odds are fearful. Let it be impressed on the mind that in this free country intelligence is better than wealth.

What have you done to advance the interests of agriculture in the town or county where you reside? What to aid the funds of the county or state society? What to disseminate agricultural information? There are few men so positively mean as a farmer destitute of public spirit. The means of the intelligent farmer may be limited; but his disposition will be good, and that will produce its proper results in action. He will do what he can; and no more can be asked. His influence will always be on the right side; he will be no drone.

What experiments have you made the past year in farm husbandry? and what has been the result? If favorable, you should let it be known that others may practice the same methods; if unfavorable, that others may escape the error, or be saved useless expenditure. Every farmer may do much in the way of experiment, to advance the cause of agriculture, if they are well and carefully conducted, and the results given to the public.

Do you receive, and read, an agricultural journal? If not, go at once and subscribe for some good one, and pay in advance. The merchant, the manufacturer, the doctor, the lawyer, and the divine, all have their journals, and if they understand their true interests, read them too. And so must the farmer do, if he would not be behind the age, or ignorant of his profession.

There is a somewhat prevalent idea that the farmer has nothing to do in winter. This is a great mistake. If he has improved his time well; if he has everything right he will have his time during the winter more at command than otherwise; but he will have no moments for idleness. The improvement of the body and the mind will furnish ample occupation; and the attention bestowed will not lose its reward.

EXTRACTS OF LETTERS, &c.

VALUE OF THE CULTIVATOR.—A subscriber in Beaver co. Pa., says:—"I planted corn after the directions found in your paper, and the consequence is, I have doubled my crop. Farming is done in a different style from what it was before farmers commenced reading. I frequently hear farmers say they would not take a dollar for the valuable information in a single number of the Cultivator."

INQUIRY.—A reader wishes Mr. Cook to give the size of the water wheel for his water power churn, how many buckets or paddles it should have; and to state whether a rise or fall in the wire will hinder its operation, providing pulleys or rollers are used for it to run upon; and also whether it will work at a distance of 160 yards from the house.

SNAP DRAGON.—Mr. A. P. McCORD of La Grange, Dutchess county, informs us that this "abominable weed" may be eradicated by covering it with a coat of straw, thick enough to smother vegetation. Some years since, I saw two patches of it covered in this manner when the field was in grass; the straw was suffered to remain two years, after which it was scattered and the ground broke up. The extirpation was complete."

LARGE RADISH.—J. C. Cunningham, Esq., P. M. at Fairfield, Ia., informs us that Mr. Wm. More of that place the 16th Sept. had a radish growing which measured 38 inches in circumference. "The Hoosiers will crow over this till you down easters can beat it."

WINTERING BEES.—From a letter from Mr. M. QUINBY of Coxsackie:—"Last fall I followed Mr. Week's direction, wintering two swarms of bees in one hive. I put the bees of twenty hives in ten; some of the swarms very large. Weighed them the 1st Oct; again 1st of April. Greatest loss in that time 25 lbs.; least 21 lbs. Weighed also several single swarms at the same time. Greatest loss 21 lbs.; least 14 lbs. They were in the house during the coldest weather. When they first began work in the spring, the double swarms promised most; but single ones gained so rapidly, the first of June found them in a better condition both as it respects numbers and honey. The result through the summer was decidedly in favor of the single swarms. It may be an advantage to put together two very small ones, but my experiment is against making good swarms better by such means." Mr. Q.'s remarks on swarming bees, &c. will be given hereafter.

SALT FOR THE CUT WORM.—A letter from "G. E. H.," Brownville, Pa., says—"I tried the same experiment as my neighbor D. Miller did, (see Cult., vol. 9, p. 118,) viz: applying salt to corn to kill the cut worm, on 30 acres of land, but with no encouraging success, as it did not kill or keep them off, though it doubtless promoted the growth of corn."

LARGE PUMPKINS, &c.—From a letter from Mr. D. A. BUCKLEY, Manchester, Ill.:—"To show you the richness of our land, I will state that Mr. R. Swallow raised from one pumpkin seed 559 lbs. pumpkins, and 965 lbs. of vines. Another farmer, from one seed, raised 780 lbs.—one pumpkin weighing 164 lbs.; and Mr. G. C. Wood raised a radish in his garden that weighed 17 lbs." The writer adds:—"I wish you would draw the attention of plow makers to the necessity there is for one that will scour in our soils, as such a one is very much wanted."

MISSISSIPPI.—Extract of a letter from a subscriber near Vicksburg, dated Oct. 19:—"The crops of corn are very abundant in this quarter. Cotton, if the present fine weather continues, will be about an average crop on the uplands; but on the alluvial bottoms of the Mississippi it will be very abundant, and generally of a good quality. The Cultivator is doing much good in this country. Most planters raise nearly or quite enough meal to last the year round, and sweet potatoes in abundance."

PROGRESS OF THE SILK CULTURE.—We think the quantity of cocoons made in the United States the past season, could the whole be ascertained, would surprise the warmest advocates of that culture. The following list of the pounds of cocoons produced in a single neighborhood, near Warwick, Penn., which we take from a letter to Mr. Colman, will show what a few individuals who are in earnest can do:—John McSummy and D. Eberly raised of cocoons 856 lbs.—John Metzler, 423 lbs.—R. and H. Carson, 600 lbs.—A. H. Carr, 400 lbs.—Michael Glein, 300 lbs.—M. Warfell, 300 lbs.—D. Mellinger, 200 lbs.—M. Bushong, 172 lbs.

BEES.—"The best place to put bees in is a *dry, cold, and dark room or outhouse*, if it can be obtained. The colder the winter the better, if the air is dry. Damp cold gives bees the rot. Put your bees there the last week in November, and let them sleep quietly till the flowers begin to come out in the spring. In Switzerland a whole village clubs together, and hires a cold dry room which they darken and put all their bees in."

We find the above in an exchange paper, and think the system recommended at least plausible. So long as bees remain torpid they do not eat; and to keep them in this state, the temperature of the place where they are kept must be low; it must also be dry, or the mass of bees and comb will become mouldy. Bees die in multitudes by being enticed out of their hives in sunny days, before they are able to obtain food, or get back to their hives.

LARD OIL.

We have received from various sources inquiries as to the nature and preparation of oil from lard, a subject which is becoming a matter of great interest to the country; and we have embodied below such information as can be obtained, for the benefit of those interested.

Neither animal fat, or vegetable oils, are homogeneous, but are composed of two substances, one of which remains solid, while the other is fluid. These two substances are termed *Olein* and *Stearine*; the first being the fluid part, and the latter the solid. The degree of hardness or fluidity of the original fat or oil, such as tallow, lard, olive oil, &c. is depending on the relative proportion of these two substances; tallow containing more stearine than lard, and the latter more than the vegetable oils. Chevreul was the first to distinguish and separate these two principles, a discovery which promises to effect quite a change in some of our commercial interests, and to influence in no slight degree our agricultural ones. Lard melts at a temperature of about 82°; its specific gravity at 60° is 0.938. By long and powerful pressure at 42° between folds of blotting paper, it yields 62 parts in 100 of weight, of colorless olein or oil, of the specific gravity of 0.915. Of this 100 of boiling alcohol dissolves 123 parts. The solid part of the lard left after the olein is extracted, is solid, granular, and fuses at about 100°. This is the substance which when made into candles, resembles spermaceti in hardness, and burns with much clearness, while the oil so extracted is the lard oil which is rapidly coming into use for lamps, machinery, woolen factories, &c. The olein and stearine of olive oil can be separated in the same manner as lard, by reducing the oil to a low temperature, and submitting it to the same process. The fact that the olein remains combined with the alcohol in which lard, tallow, &c. has been boiled, while the stearine separates on cooling, constitutes the base of the processes for separating and rendering marketable the two articles. The processes adopted by different manufacturers vary very much, and this is the reason why some samples are much more perfect than others.

That prepared according to the patent of J. H. Smith, New-York, is a good article, and we extract so much of his account of his method, as will give a general view of his process. It may not be amiss to state, however, that the Philadelphia manufacturers produce superior oil by a somewhat different mode; and those of Cincinnati, by still another system of treatment. After stating that the vessel in which the lard is to be melted and boiled, should be of a capacity of from ten to one hundred barrels, and that the length of time required for the separation depends much on the quality of the lard, that which is fresh not requiring more than 4 or 5 hours, while that which is old may require ten or twelve, goes on to say:

"My most important improvement in the within described process, consists in the employment of alcohol, which I mix with the lard in the kettle or boiler at the commencement of the operation. When the lard has become sufficiently fluid, I gradually pour and stir into it about one gallon of alcohol to every eighty gallons of lard, taking care to incorporate the two as intimately as possible; and this has the effect of causing a very perfect separation of the Stearine and Elaine from each other, by the spontaneous granulation of the former, which takes place when the boiled lard is allowed to cool in a state of rest. I sometimes combine camphor with the alcohol, dissolving about one-fourth of a pound in each gallon of alcohol, which not only gives an agreeable odor to the products, but appears to co-operate with the alcohol to effect the object in view; the camphor, however, is not an essential ingredient, and may be omitted; while spirit of a lower proof than alcohol may be used, but not with equal effect or benefit.

"After the boiling of the lard with the alcohol has been continued for a sufficient length of time, the fire is withdrawn or the supply of steam cut off, and the mass is allowed to cool sufficiently to be ladled or drawn off into hogsheads or other suitable coolers, when it is to be left at perfect rest to cool down and acquire the ordinary temperature of the atmosphere; and as the cooling proceeds, the granulation consequent upon the separation of the Stearine from the Elaine will take place and become perfect. The material is then to be put into bags and pressed moderately under a press of any suitable kind, which will cause the Elaine to flow out in a state of great purity, there not being contained within it any appreciable portion of Stearine; and this pressure is to be continued until the Stearine is as dry as it can be made in this way. The masses of solid matter thus obtained, are to be re-melted, and in this state are poured into boxes or pans of the capacity of ten or twelve gallons, and allowed to form lumps or blocks; which when removed from these vessels, are piled or stacked in a room for a week or ten days, more or less, the room at a temperature of nearly 80° which will cause a sweating or oozing from the blocks, and they will improve in quality. The blocks are then to be rolled in cloths or put into bags, and these placed between plates, are to be submitted to very heavy pressure by means of an hydraulic press. After this pressure, it is brought again into the form of blocks, and these are to be cut up by means of revolving or other knives or cutters, when the pieces thus obtained, are to be put into bags and subjected to the action of hot water or of steam, in a press, until it becomes hard enough to be manufactured into candles, or put up for other purposes to which it may be desired to apply it. And the manner of subjecting it to the action of heated water or steam, is to place the bags containing the Stearine, in a box or chest into which heated water or steam may be introduced, but not to such extent as to fuse the Stearine. A follower is then to be placed against the bags contained in the chest or box, and moderate pressure made upon them, and the material will now be found to have acquired all the required hardness, and to possess a wax-like consistency, such as would generally cause it to be mistaken for wax."

We consider the manufacture of oil from lard, as one of the most important ones, particularly for the agriculture of the great west, that has yet been attempted; and its influence is as yet but beginning to be felt in the country generally. For the use of the light houses on the lakes west of Ontario, about 11,000 gallons are annually required; for steamboats, ships, machinery, &c. west of the Alleganies, about 30,000 gallons more, making a total of some 40,000 gallons annually; and this amount is rapidly increasing. We find in the Cincinnati Gazette, the following statement respecting one of the manufactories of lard oil in that city, and it must be remembered that this is only one of many establishments already in operation for this manufacture. They are springing up in Illinois, Indiana, Michigan, and Ohio; and the increasing demand for lard in the Atlantic cities, proves that the manufacture is not confined to the country west of the mountains.

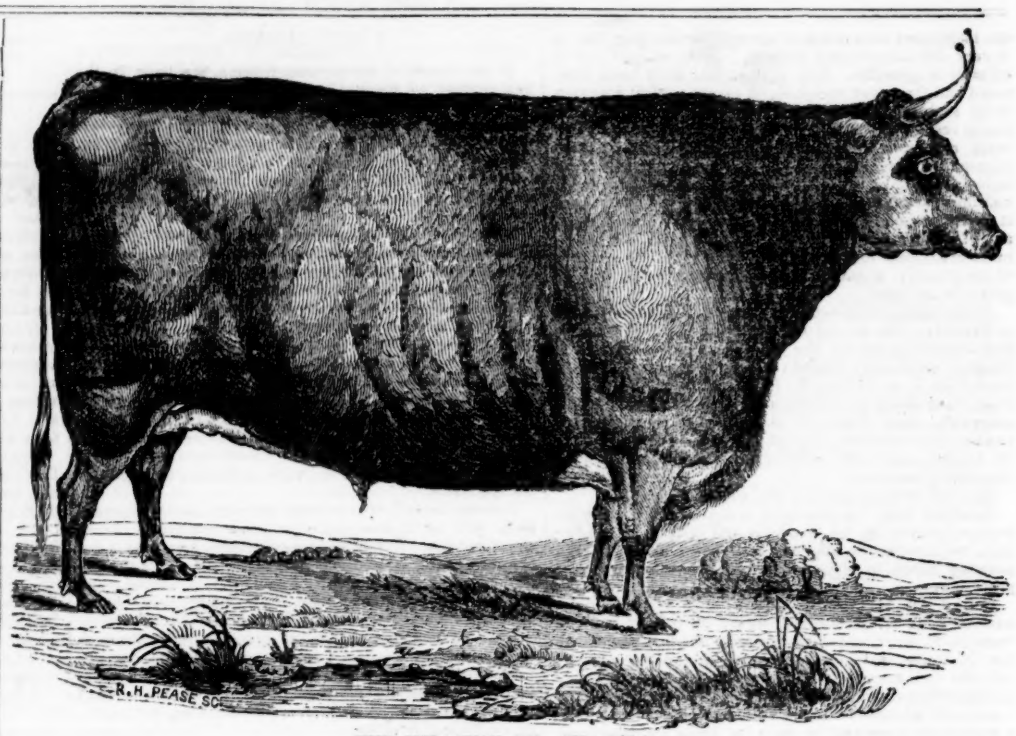
"R. W. Lee & Co. use every twenty-four hours, sixteen barrels of lard at their establishment. It requires portions of two hogs to make a keg of lard; and portions of five hogs to make a barrel. We killed last year about one hundred and eight thousand of these animals in the city, and the calculation is that about the same number are killed out of it and brought to the city, so that we may put down the number in our market, at two hundred and sixteen thousand. From these data* it will be seen that one manufactory uses up the lard of 160 hogs every twenty-four hours, or 1120 a week, or 4,800 a month, or 58,400 a year! so that a few manufactories of this kind, would consume portions of all the swine that the farmers in our section of the country could raise."

The farmers of the Mississippi valley can make lard enough to supply the United States with oil and candles we have no doubt, and probably furnish some for exportation, to be returned to us in the form of olive oil, as, from the demand for lard for exportation in our chief cities, is now doubtless the case. There is no question but that the oil made from pure lard, is fitter for every purpose to which olive oil is applied, than that, and the difference in price makes the transmutation an object of some consequence. There is certainly no assignable limit to the quantity of pork and lard that the west can produce, should the demand in any form warrant the efforts of the farmers in that department of agriculture; and of the quality of the oil when properly prepared, there cannot be the least doubt. The Cleveland Herald, in announcing the establishment of a lard oil manufactory in that place, says:—"Lard oil for machinery and wool is unrivaled. It can be made to remain fluid in the coldest weather, and the oil can no more come back to lard, than whiskey can be brought back to corn, when it is properly manufactured. The stearine candles are of various qualities, from common to those exceeding the best of sperm. They burn better, stand a greater temperature, last longer, and are, as well as the oil, afforded much cheaper than sperm."

Corn oil might be made to a great extent in the west, and considerable quantities have already been brought eastward. But the fact that it is only produced in distilleries, and its use must be coupled with the extension of one of the greatest evils that can afflict any country, will prevent the manufacture to any extent. We have seen corn oil burned in lamps, and it proved of the best quality for that purpose; and could its production be separated from that of alcohol, think it would soon become one of profit to the western country. As it is, oil from lard will be depended on to supply the country west of the mountains, and from the quantity that has already been exported eastward, it bids fair to become a formidable competitor to the whale oils of the Atlantic states.

We have stated that of good lard, 62 lbs. in 100 were oil, and the remainder stearine; but this proportion, it must be recollected, will not be obtained in the process of ordinary manufacture, where the details cannot be as accurate as in the laboratory of the chemist. Tallow contains about three-fourths its weight of stearine, which in the best specimens much resembles wax in purity and in burning. The stearine of mutton tallow is white, and partly translucent, and the oil is colorless as water. It is probable that more simple and cheap methods of separating stearine and olein, will be discovered, than those now used, as the whole manufacture may be considered in its infancy.

* We give the article as we find it, but do not see how the results stated, follow from the data given. Five hogs to a barrel, and sixteen barrels daily, are 80 hogs daily, instead of 160, and so throughout the reckoning



THE SYRACUSE OX—(Fig. 101.)

Owned and fed by P. N. Rust, Esq., *Syracuse, to which was awarded the First Premium of the N. Y. State Ag. Society for the best fat animal exhibited at the Albany Fair*, 1842.

This ox is now eight years old. His live weight, Feb. 19, 1841, was 2,360 lbs. On the 16th Jan., 1842, it was 3,400 lbs. When exhibited at the State Fair in Albany, Sept. 28, 1842, he was said to weigh 4,200 lbs, which would be a gain of about 3 lbs per day, for nineteen months. He yet retains his activity and appetite, and continues to take on flesh about as fast as ever.

SUGAR FROM CORN.—We are gratified to see from papers in various parts of the country, that experiments are making to test the practicability of making sugar from corn, and that so far they all appear to have been successful in producing good molasses at least. The great richness of cornstalk juice, when the plant has been grown as recommended by Mr. Webb, that is, planted thick, and prevented forming ears, is truly surprising; and far exceeds that of the cane. Mr. Goodrich of Terre Haute, Ia., finds that eight gallons of such juice makes two gallons of molasses, pronounced by competent judges equal to sugar house molasses; and other experimenters have arrived at the same results. Where the process adopted by Mr. Webb is used, there will be no difficulty in converting this syrup into sugar.

THE BROOKLYN COW.—Mr. Smith, Mayor of Brooklyn, exhibited at the Show of the American Institute, a cow that has yielded for ten months, an average of 27 quarts a day; and for 20 days in succession, gave from 33 to 34 quarts of milk per day. The cow is without pedigree, being purchased by a master of a vessel in England, and sold on her arrival here. The food has been Indian and oat meal, about 6 quarts each per day, with as much hay and grass as she requires. The owner has frequently bled her slightly, and occasionally bathed her back and loins with spirits of turpentine. But whatever may have been the treatment, the yield of milk is certainly an extraordinary one.

BLACK PALMER OR TURNEP WORM.—A late number of the New Farmers' Journal, states that after a variety of unsuccessful experiments to free a crop of turneps from the formidable pest of the black worm, he succeeded completely, by taking large elder boughs with their foliage, drawing them over the plants, and while they were thus swept upon the ground, sprinkling caustic or fresh slaked lime over the worms. It is probable the cabbage worm and other marauders, might be destroyed in the same way.

Original Papers from Contributors.

"NATIVE" AND OTHER CATTLE.

MESSRS. GAYLORD & TUCKER—I have read, with great interest, the first volume of the Transactions of the New-York State Agricultural Society; and with none of the papers therein contained have I been more pleased than with the one on "Neat Cattle," by Henry S. Randall, in which are many useful suggestions in regard to the improvement of our cattle, and the production of a breed, or breeds, suited to our climate and purposes.

Mr. R. fears that many are "too prone to underrate our native stock," which he thinks "has produced animals that would suffer little by comparison with those of any other breed." In some remarks on Mr. Randall's ideas by Mr. Wm. H. Sotham, in the Sept. No. of the Cultivator, is the following rather *ultra* expression: "He [Mr. R.] may select the best [of the native stock] if he chooses, and breed them until he is of the age of man, and my word for it, he will never breed a beast that a good judge would condescend to put his hand upon."

There may be a difficulty, I confess, in deciding such a proposition. In the first place, the *premises* should be understood and admitted by the parties. What, then, is "*native stock?*" Here is the grand point; and they may as well dispute about the merits of *British* sheep, or any other species of animal which embraces varieties very widely different in their characters, as to attempt to decide that matter until this point is settled.

If Mr. Randall is to be allowed, (and this is obviously his intention,) to take such animals as Mr. Rust's fat ox as specimens of the scrub or "native breed," it appears to me he would be under no necessity of breeding till he is three score years and ten, before he could "produce an animal that a good judge would condescend to put his hand upon." While on my late trip to the East, I saw this ox of Mr. Rust's. He is truly a most *superb* animal. His portrait in the "Transactions" does not do him full justice. He is finer in the neck, and every way more *finished* than the picture represents. He has, both in shape and color, all the leading characteristics of a Hereford; his shoulders are well set, his chime full, back short, loin and hips very wide, rump long, legs clean and sinewy, and he is considerably heavier than any other animal I ever saw of so little bone and offal. At the time I saw him, Mr. Rust thought his weight could not be less than 3,700 pounds; and it had been ascertained by repeated weighing, that his gain was at least three pounds per day. Notwithstanding his immense weight, he was, from the justness of his proportions, very active. When lying down, he would get up as quick as a sucking calf.

I saw the man who said he raised this ox; and the history which he gave of him was, that the bull which sired him was "*part Hereford.*" In this, both he and Mr. Rust agreed. I cannot see why this statement need be doubted; for according to an account which Mr. Bement has published, some Herefords were introduced into this part of the country several years ago. But history and tradition out of the question, it appears to me there would be as much propriety in taking an animal which should show all the principal points in shape and color of an improved Short Horn, as a specimen of the "native stock," as there is in taking this ox as such. An example of this kind would probably be regarded by the advocates of the Short Horns as not altogether fair.

Your reviewer, Commentator, in the Oct. No. of the Cultivator, in his remarks on Mr. Sotham's expression, given above, says Mr. Bakewell made a similar experiment in England to that proposed by Mr. Randall, "and it is presumable with no better cattle to begin with than Mr. Randall might probably find of what is called the "native breed in New-York." Now it may be pretty near true that Bakewell began to breed with cattle which were not better than those which *some* have called *native* in this country; but from the best evidence to be had, it seems to me certain, that the animals with which Bakewell began to breed, were not only *very good in themselves*, but belonged to a race whose superior excellence had been long acknowledged. That under the direction of his master mind they attained still higher improvement, is neither denied nor doubted; but that the *originals* were altogether superior to our common cattle, is plain, if we admit testimony on this subject.

The first great advantage which Mr. Bakewell possessed over one who might attempt a similar experiment, confining himself to the common cattle of this country, was the *fixed character* of his stock. Their leading points had been the same, without admixture, as far as we learn, for ages. Hence he might calculate on a certain transmission of the qualities possessed by those he first selected, hereditarily, to their offspring. The originals of our common cattle have been brought from almost every country and district from which this country has ever received emigrants. These animals, so heterogeneous in their character, have generally been bred in an indiscriminate, haphazard manner, until they have, in most cases, lost all marked resemblance to any distinct breed.

Youatt, in the work on British Cattle, gives a very interesting account of the stock from which Mr. Bakewell made his original selections. Under the head of the "Long Horns," he says, "in the district of Craven, a fertile corner of the West Riding of Yorkshire, bordering on Lancashire, and separated from Westmoreland chiefly by the western moor lands, there has been from the earliest records of British agriculture a peculiar and valuable breed of cattle." At page 189 is given a portrait of a Craven bull, "supposed to bear about him many of the characters of the old breed." The portrait conveys an idea of a most excellent animal; one of the best in the book; the body and limbs indicating surprising strength, with a rich mellow coat of hair.

In 1720, it is stated that a blacksmith by the name of Wilby commenced the work of improving the Craven cattle, with some cows which he procured from Sir Thomas Gresley. "Soon after this," says Mr. Youatt, "Mr. Webster of Canley, near Coventry, distinguished himself as a breeder. He too worked upon Sir Thomas Gresley's stock. He was at considerable trouble in procuring bulls from Lancashire and Westmoreland; and he is said to have had the best stock of cattle then known." At pages 191, 192, it is said, "improvement had hitherto been attempted to be produced by selecting females from the native stock of the country, and crossing them with males of an alien breed. Mr. Bakewell's good sense led him to imagine that the object might be better accomplished by uniting the superior branches of the same breed, than by any mixture of foreign ones."

"On this new and judicious principle he started. He purchased two Long Horned heifers from Mr. Webster, and he procured a promising Long Horned bull from Westmoreland. To these and their progeny he confined himself." • • • "Many years did not pass before his stock was unrivalled for the roundness of its form, and the smallness of its bone, and its aptitude to acquire external fat, while they were small consumers of food in proportion to their size."

The object in making these quotations is to show that the ancestors of Mr. Bakewell's stock had been considered excellent long before he began his career as a breeder.

In what I have said, I disclaim any intention to "underrate the native stock," but have been influenced only by a wish that the public may be set right in matters of fact.

SANFORD HOWARD.

Zanesville, Ohio, Oct. 8, 1842.

THE WILD TURKEY.

P. S. In your answer to "poultry inquiries," you say you "are not aware that the wild turkey has ever been crossed with the domestic one, or that a successful attempt has ever been made to domesticate them."

The cross you speak of has often been made here; and attempts at domesticating the wild turkey are not unfrequent, and are sometimes successful. They are much disposed to ramble, and their wild nature often leads them to take to the woods from whence they never return. Could they be restrained in their rambles, there is no doubt that their wildness would leave them after several generations, and they would become as tame as other turkeys. According to the principles of phrenology, the organ (perhaps it is "*cautiousness,*") which gives them their wildness, from being constantly called into action, becomes very strong and developed in a remarkable degree. In a state of domestication, where there are few or no enemies to be guarded against, they have little use for this organ. From the circumstances in which they are placed, it is not enlarged and strengthened by excitement and action; consequently, this organ is not developed as it is in the wild state, but becomes weaker with every succeeding generation produced in the domestic state, until at last it is exactly adapted to the condition of the bird.

An advantage is thought to result from crossing the wild with the domestic turkey; as the latter thereby acquires hardiness, and freedom from those diseases which frequently destroy the young.

Col. Jaques of Charlestown, Mass., has the wild turkey in a fine state of domestication. S. H.

SHEEP HUSBANDRY.

2d P. S. I have read the article of Mr. J. McD. McIntyre, in the Oct. No. of the Cultivator, on the "Wintering of Sheep." It is a useful document. I also read the article of Mr. Grove in the "Transactions," to which Mr. McIntyre refers. I wish Mr. Grove would now give us the average weight of his fleeces, together with the price per pound which they have brought or will bring this year; and that Mr. McIntyre will state the same in regard to the price of his fleeces. We can then see which is most profitable for *wool*. There can be no doubt of the fattening propensity of Mr. McIntyre's sheep. I saw them when I was at your city in July last, and I have never seen sheep in better condition than most of his were on such short pasture. His wethers, a cross of the Cotswold and South Down, are noble fellows. When he kills them, I want to hear from him the particulars of feeding, weight, &c. &c.

It is, in my opinion, a mistaken idea, that we should encourage but one variety of sheep. The different varieties are adapted to different localities. Our country possesses a vast extent of territory well adapted to the production of sheep and wool; and our true policy would be to offer such encouragement as would lead to the production of all the various sorts of wool, excepting, perhaps, those of the very lowest price. This would open the way for the different breeds of sheep. Those most valuable for the carcass might be kept near market, and those valued chiefly for the wool, in the interior. In this way new channels of labor and capital would be opened, and additional stimulus given to enterprise.

S. H.

A German farmer in Pennsylvania, has given 200 bushels of wheat to the poor, as a thank-offering for his abundant harvest.

THE IMPROVED CULTURE OF COTTON—No. I.

Gathered 5,989 lbs. per Acre.

MESSRS. GAYLORD & TUCKER—Permit me to remark in opening a correspondence with you and the planting interest of our country, through the medium of your invaluable agricultural journal, upon the subject of the "*proposed improvement in the culture of the Cotton Plant,*"—that had I not tendered you such promise, since re-examining the extent of the work, I should most assuredly, for the present at least, shrink from the arduous task. Such communication must necessarily, that we may arrive at the true merits of the improved system, embrace an extended rationale, setting forth in the first place, a faithful expose of the present *kill and cripple, and in every way injurious system of culture,* by which the Cotton plant is now grown. Secondly, the principles upon which the proposed improvement is predicated; its reasonable and perfect adaptation to the best interests of the planter and the country. In doing which, I propose instituting a series of argumentation and comparative analysis, as drawn from actual experiments and careful observation,—by which to show most conclusively, that the innate character of the cotton plant has been entirely misconceived, and consequently the plant subjected to the present contracted and ruinous system of culture,—singularly inadequate to that copious development in the perfection of staple and great production of which the plant is capable. And in the third and last place, to render the subject clear and intelligible to all, it will be necessary to give in detail, the "modus operandi," by which my experiments have been conducted, together with the character and quality of the soil, &c.

Thus you perceive, to treat the subject with that justice, which its grand importance demands, each position in the above prodrome, will require a paper of as great length, at least, as will occupy all the space in any one number of the Cultivator, which you can spare from other matter of general interest to your numerous readers.

But gentlemen, if you shall esteem these papers as meriting sufficient attention, from the all-absorbing interest being excited in the subject discussed, to engage in their publication; surely, after devising the improvement, instituting the experiments, and directing the labor, and last, though not least, having witnessed the triumphant success, equaling my most sanguine expectations, attending the operation, I may spend a few leisure evenings, during the fall and winter, "with my grey goose quill," in communicating the result. With one other sentiment, I shall have closed the exordium; by remarking that the warmest and most enthusiastic aspiration glowing within my bosom, is to see the science of agriculture,—like the ark of the covenant, in the Jewish ceremonial economy, occupying not only the high places in the land, but as a fixed and governing principle in the hearts of the industrious and intelligent farmer and planter-citizens of our blessed republic,—shedding abroad upon every other science and profession, as it necessarily must, its thousand benign influences, of encouragement and support, riches and honors, together with peace and perfect happiness, "*in tempore,*" the sure rewards of a great and good people.

It may not be improper, before entering immediately upon the discussion of the subject, simply to state some of the inducements, which the proposed improvement in the culture of cotton, holds out to the intelligence and industry of the planter. Its prime object is not so much to augment the number of bags, or multiply the number of pounds already equaling the consumption, as to curtail the enormous expense attending its production; thereby enhancing its value to the planter, in precisely the same ratio. In other words, I propose not only to show, but most satisfactorily to prove, that it is perfectly practicable to produce the 2,000,000 bags—the cotton crop of the United States—with *one-third* the capital engaged, under the present system of culture, in its production. Now if my premises be correct, my conclusions will appear not more fascinating and encouraging to the practical man, than axiomatic. To satisfactorily establish the fact, that the high grounds which I here assume, are not only founded in sound reason, but are tenable in practice, entertained and frequently expressed during the last two years, I have perseveringly devoted, with unceasing energy, the labor of the present season; assisted by careful observations drawn from experiments, as commenced by me last year. A faithful and detailed description of the two systems of culture, essaying neither to prejudice the one, nor accord undue consequence to the other, for the good of the country and the best interests of my fellow citizens engaged in planting,—shall be the single and express object with me, in preparing these papers for publication.

My first object then, as above specified—the work of this number—will be to furnish you, and all interested, with a "faithful expose" of the present, as I term, and shall prove it to be such, "kill and cripple, and in every way injurious system," by which the Cotton plant is now grown. To some persons, this course may appear at first view of the subject, as supererogatory and quite irrelevant to my purpose; yet I am convinced, that you, gentlemen, and the experienced planter, will view it wholly different; since it would be perfectly idle to attempt the refutation of error, until its existence and baneful tendency, be first shown. And here let me congratulate the good cause of reform and improvement, that in the discharge of this very delicate task, I shall be able most fortunately, to bring to my assistance, an article written "on the Culture of Cotton," which has given universal and acknowledged satisfaction. To the attentive peru-

sal of that very excellent article, at page 49, of the current volume of the Cultivator, (March No.) I wish most respectfully, to recall your attention, and that especially, of every man engaged in the culture of Cotton, whose grand object is his own, his country, and posterity's welfare. This communication appears over the signature of M. W. Philips, of Log Hall, Miss. That your correspondent of Log Hall, is a gentleman of intelligence and experience in the culture of Cotton, under the present system, will appear at once obvious, when we come to examine carefully, which we should, the nice and perspicuous certainty with which he has detailed the several operations, even the smallest minutia, attending the tedious routine of growing cotton under the practice of the country. The satisfaction of those readers, who may not possess the convenience of reference to this article of Mr. Philips, as likewise the necessity arising under certain positions of argument, in elucidation of the several prominent features of advantage, which the proposed improvement offers to the planter render it proper that I make such extracts therefrom, as will serve to illustrate here, the principles of the system. Previous to introducing such extracts, I here remark in reference to that performance, what I think the candor of every experienced planter will readily accord to it,—that it contemplates a greater degree of perfection in many of its operations, as practiced by its author, than is common to the system as we generally meet with it among planters; hence the utility of its quotation, *hoc tempore et loco*. Mr. Philips says:—

"When our land has been the preceding year in cotton, we either pull up the stalks, throw several rows into one heap row, roll them into heaps and burn; or thresh them down with cudgels, to be plowed in. The latter plan I pursue. Having cut, heaped, and burnt up, what logs may be lying on the ground, we commence our plowing operations by running a furrow, (straight on level land, with the hill on rolling or hilly land,) in the old water furrow with a shovel plow; to this we throw two furrows with a turning plow, and leave it so until time to plant. Should the land have been in corn, many cut down corn stalks, pile and burn, (I plow all in,) and proceed as above; if in oats, I invariably flush deep with a two horse plow, and run off rows as before, 4 feet apart in thin land, and 6 in rich land; on our strongest land, rows are even as much as 8 to 10 feet a part. The plowing so far done, cannot in my opinion, be done too early. From the 1st to the 5th of April, some seasons earlier, we commence planting cotton; having completed planting all corn that the land will admit planting, and now break out the entire row well, and as deep as we can, about 4 inches the deepest, being particular to break out just in advance of the hands planting. * * Then open out the furrow for seed, with some implement about three-fourths of an inch deep. * * This row should be as straight, or as regular in its curves as possible, to permit after work being done to the best advantage. In the furrow on the ridge we sow seed, having had them hauled and dropped in parcels at suitable distances in the field, from 2 to 4 bushels to the acre; not being particular, only in having enough; then cover with a wooden tooth harrow, or a board about 6 inches wide, 18 inches long, concave on the lower edge, and pinned with the heel pin of shovel plow on the chip. * * We do not desire to cover cotton over half an inch; and indeed the covering is not necessary, unless in dry weather; for a light shower will so beat the seed in the soil and compress the wool left on seed, so as to germinate immediately.

"Having planted about half the crop, we pursue other business, for a few days, so that an entire scraping comes on not at same time. One hand and horse can open 10 to 15 acres, 4 feet apart, one hand can sow seed, and one hand and team cover. But I look on it as very hard work to drop 15 acres; though I have done it myself, I could not have repeated. I always begin to scrape as soon as I have a stand up, grass or no grass, and no regular time for this."

This *first operation*, will be more familiarly recognised when styled, as it is by the great majority of planters, *chopping out*. P. continues—

"I have usually begun to scrape by running the bar of a turning plow next to row," (*a very common practice,*) "throw from the plant to w[illegible] furrow about 1 1-2 to 2 inches deep; but believing with others, it is not best to take earth from the bed, I now use a scraper, attached to chip of shovel plow, that will barely sweep off the surface as near the plant as possible, throwing the surface toward middle of row. When this is well done, one good hand can clear the remainder as easily as is usually done with two ordinary hands, by passing the hoe through the row, cutting out all, to one or two stalks, the breadth of the hoe apart, say about 10 inches apart, leaving the row perfectly clean and scraped. * * About a week or ten days we commence molding the plant with"—(the plow that may best suit the fancy of the planter.) "We make it a point to get the plows in at this work as soon after scraping as we can, and get back with hoes to clean once more, either by scraping again or dirting; and if pleasant weather cut out at this time every other stalk. (In poor land I have the stand as at first, single stalks about 10 to 12 inches apart;) reducing to a stand one stalk, in good land, *about* 2 feet apart, in rich land even 3 feet *at times*. If this has been done well and in due season, unless a wet spring, the push is over, as we now cultivate with double shovels, (I prefer it to any thing I have tried,) cultivator and harrow, just as the growth of grass and appearance of earth indicate—governed by—keep clean and stir well. I throw a little earth to the plants, the two or three last workings, but never make a hill unless on hill sides, these merely to prevent washes."

This brings us to the opening snow white staple, blushing to the harvest, which we all gather in the same way, by the fingering operation, since Mr. ———'s boasted *Cotton picking* machine, (at Augusta, Geo.) proved a signal failure, as every such *inanimate neuter* probably ever will, in gathering clean cotton from the plant.

Having turned to and carefully read this article, (which I sincerely desire that every lover of truth do for himself,) I will now add my own testimony, by remarking, that we have here a most faithful and graphic description of the modus operandi of preparing, planting, and cultivating the cotton plant, as practiced throughout the entire length and breadth of the cotton region, from Charleston to New Orleans, with variations so slight as not to affect the general result.

Having the subject now fairly before us, I shall conclude this paper, by making a few general observations, as preliminary to the special dissection of this *monstrous* [illegible]*em*, to which I shall carefully attend in the next number. I first observe then, that it is matter of great astonishment to me, that this fallacious system, containing within itself, complete, the elements of certain destruction, has not long, long since exploded. Who among the intelligent planters in the south, and they are innumerable, that has not observed, yea more and sorely felt too, the very striking disparity that exists between the enormous investment of capital, in operating under this system and the meagerly accruing profits! This is not a question however, requiring a formal reply. We have only to look around us on every hand, and remark upon the dilapidated appearance which almost every cotton plantation, of but a half a dozen years standing, presents to the eye, sickening under this blighting influence! Not that the Southern planter has no taste for improvement; the very reverse is the fact; the very influences which our southern genial clime inspire, are both animating and improving; but the system of culture which he pursues, like a vampire, preys upon his vitals, withers his energies, and so saps his profits as to entirely forbid his attempting that improvement about his plantation, so necessary to convenience as well as comfort; and which he loves to admire. Under a scientific and judicious system of agricultural policy, which I contend to be the system best and most profitably adapted to the culture and maturity of the cotton plant, the very idea of wearing out and rejecting land, is a solecism: the constant and invariable tendency of such system is, to improve the soil and augment its production,—ameliorating thereby the condition of every object, both animal and inanimate, that comes within its resuscitating influence. But on the other hand, what have we to look upon as the effect of the present flaying system, but one uninterrupted scene of broad spread ruin, and growing worse? Old worn out fields, red hills and gullied steeps,—admonitory lessons to posterity to migrate to other climes.

N. B. Cloud, M. D.

Planter's Retreat, Ala. Nov. 1, 1842.

CHEMICAL MANURES—AGAIN.

Editors of the Cultivator—I would inform my friend, Mr. Woodfin, that I probably committed one error in the article he has twice criticised, and that is, in acknowledging that under any circumstances, ammonia can decompose plaster of Paris at atmospheric temperatures. I am aware that this opinion is directly opposed to that given by Liebig, in his celebrated work on Agriculture and Physiology, as well as to the admissions of Daubeny in his Oxford Lectures. Those authors are pioneers in the application of science to agriculture, and their works are among the noblest mental efforts of the age; and will no doubt be productive of invaluable results to future generations, if not to the present. Yet the more formidable the standing and the names of authors, the more necessary it is to investigate their opinions, and expose their fallacies.

If my friend, Mr. Woodfin, has been practically engaged in agriculture, he has no doubt observed, that when the leader of a flock of sheep leaps over a fence, the flock suddenly become magnetised by the same impulse, and the whole will leap over, even if they should all land in a quagmire. Just so it is with authors, when a leader gives an opinion, thousands will take the same leap, without examining the ground on which they may land.

I will make a few extracts from Liebig and Daubeny, and will then endeavor to point out wherein they have erred. Liebig says, page 85:

"The carbonate of ammonia contained in rain water, (and of course when presented from any other source,) is decomposed by gypsum, in precisely the same manner as in the manufacture of sal. ammonia. Soluble sulphate of ammonia and carbonate of lime are formed; and this salt of ammonia, possessing no volatility, is consequently retained in the soil."

At page 89, Liebig asserts,—

"That powdered charcoal surpasses all other substances in the power which it possesses of condensing ammonia within its pores. Charcoal absorbs 90 times its volume of ammoniacal, which may be again separated by simply moistening it with water. Decayed wood approaches very nearly to charcoal in this power; decayed oak wood absorbs 70 times its volume, after having been completely dried under the air pump."

In the appendix to the same volume, Mr. Webster has given us extracts from Daubeny's Lectures. At page 398, Mr. Daubeny says:

"Liebig, therefore, has suggested another mode in which gypsum may be beneficial to crops in general, by reference to the property which it possesses, of depriving ammonia of its volatility, and thus preventing its escape into the atmosphere."

"This effect arises from the double decomposition which takes place, when sulphate of lime and carbonate of ammonia are brought together, the lime being converted into a carbonate, and the ammonia uniting with sulphuric acid.

"The above theory of its use being admitted, we may be encouraged to extend its application to other crops besides the leguminosæ, and also to mix it with the dung of our stables, so as to prevent the waste of this valuable material, which is constantly occurring.

"But the farmer must be reminded that it will be necessary that the sulphate of ammonia resulting from the action, should be brought into contact with some substance capable of slowly decomposing it, so as to supply ammonia to the plant.

"For there is no reason to believe that the organs of a vegetable can decompose sulphate of ammonia, and if they were able so to do, the disengagement of free sulphuric acid would hardly fail to be injurious to their structure."

Page 401, Daubeny says:

"I am indebted to an excellent scientific chemist, for the following details, which may be of use to the agriculturist in enabling him to appreciate the importance of this commodity, and to prepare for himself any quantity that he may require for his farm.

"One gallon of the ammoniacal liquor added to 1 lb. 2½ oz. of powdered, but not calcined gypsum, will produce 1 lb. of crystalized sulphate of ammonia. To effect the decomposition, the materials should be mixed and stirred up together for ten or twelve hours, a heat nearly that of ebullition, being at the same time employed. The sulphate of ammonia remains in solution, and may be obtained in a solid state, by evaporating at a low temperature."

We will now proceed to expose the scientific errors of the above writers. Liebig asserts "that carbonate of ammonia will displace lime from its combination with sulphuric acid, and from sulphate of ammonia; even when the plaster spread on the land is watered with an ammoniacal liquid. He afterwards informs us that powdered charcoal exceeds all other substances in its power of condensing ammonia within its pores."

Daubeny says "the above theory being admitted, (rather a doubtful admission,) we may extend its application," &c. In another section he admits, "that if so formed, free sulphuric acid would be liberated by chemical action in the plant, which could not fail to be injurious."

An excellent scientific chemist informs Daubeny, that at a high temperature, he has made sulphate of ammonia by adding carbonate of ammonia to sulphate of lime; which Daubeny considers a confirmation of Liebig's theory. Now any practical chemist would at once have seen the fallacy of Liebig's theory, from the very fact communicated by the chemist, as we shall presently see.

It is not to be supposed that nature will resort to forced and injurious applications, when more genial and effective series of appliances are at her command.

Of all the alkaline earths, alumina has the least affinity for sulphuric acid, and baryta the greatest. Of all the alkalies, ammonia has the least affinity for sulphuric acid, and potash the greatest. Magnesia will displace ammonia from its combination with sulphuric acid, and lime will displace magnesia. At or near the boiling point, a new series of affinities are formed, and those having the weakest affinity when cool, will at high temperatures, displace those having the stronger; but on cooling, the former affinities again resume their primary influence.

If Daubeny had been a practical chemist, the information received from Mr. Phillips, the chemist, that he had obtained sulphate of ammonia by boiling plaster of Paris with sub-carbonate of ammonia, would have led him to see the fallacy of Liebig's assertion that such a change would be produced at atmospheric temperatures.

I am not a little surprised that so acute a theorist as Liebig, should have been led into this error, when the facts he has presented us, are sufficient to disprove his theory. He asserts that charcoal, where no decomposition is claimed, will retain vastly more ammonia than the sulphuric acid of the plaster; which could not be the case, if the sulphuric acid of the plaster were neutralized with ammonia. We are informed by Daubeny, that 1 lb. 2½ oz. of gypsum, will take all the ammonia of one gallon of ammoniacal liquor to saturate its acid; and will any chemist admit that 1 lb. 2½ oz. of charcoal will retain within its pores the same quantity.

It is evident that both Liebig and Daubeny, in their eagerness to prove a theory, have been blind to mechanical and resulting attractions, which often perform important results without chemical decomposition. Witness the retention of ammonia by charcoal.

I had convinced myself, after making experiments for many months in a London laboratory, that so certain were chemical results from the table of affinities afforded by chemists, beginning with Lavoisier and ending with Davy, that chemistry deserved to be ranked as an exact science; but if this portion of the theory of Liebig be true, it will prove so uncertain as scarcely to deserve the name of science. Wm. Partridge.

New-York, Oct. 1, 1842.

SHEEP.

Editors of the Cultivator—In your October No. o:er the signature of J. McD. McIntyre, I notice an article purporting to correct an error in my letter, published in the Transactions of the New-York State Ag. Soc. for 1841. Mr. McIntyre says: "he feeds his own flock (Saxony,) 150 to 200 lbs. hay, and four bushels of potatoes, daily, to the hundred sheep." Those of your readers who have a volume of the Transactions referred to, I would ask to be to the trouble to read my communication, and then decide whether Mr. McIntyre has quoted me correctly; but to those who have not that volume, I beg leave to say that "*and four bushels of potatoes*" daily, is an addition of Mr. McIntyre's.

For two winters past, my flock has not received, on an average, over one and a half pounds of hay, daily, or its equivalent in grain, roots, &c. calculating the nutritiousness of the several kinds of provender, as laid down by the most experienced and scientific farmers in Germany.

I feed by weight rather than measure, and keep a pair of steelyards on my hay mow, and weigh often in the course of the winter, not only the hay I feed to my sheep, but the grain, roots, straw, &c. also. This is the method by which I arrive at the quantity my flock consumes. And I frequently weigh the fodder for my cattle also. I did not however intend to occupy much room in the Cultivator at this time, and therefore add only one remark more in conclusion, to express my surprise, that a shepherd of so much exactness as Mr. McIntyre shows himself to be, as to "accurately weigh their (his sheep) food," should otherwise neglect them so much, that "the long continued warm weather, coupled with carelessness in not sufficiently cleaning their yards," cause "many of his flock to lose much of their wool."

Such a negligent shepherd would not find employ long, by Your humble servant,

Buskirk's Bridge, N. Y H. D. Grove.

NORMAN HORSE "DILIGENCE"—(Fig. 102.)

The Property of EDWARD HARRIS, Esq. *Moorestown, New Jersey.*

As a member of the New-York State Agricultural Society, I feel under great obligations to Mr. EDWARD HARRIS of Moorestown, N. J. for his generous spirit and liberality, in bringing,at great expense and some risk, to exhibit at our State Fair, in Sept. last, his splendid Norman horse Diligence, whose portrait adorns this No. of the Cultivator, and added so much to the interest of the exhibition.

Mr. H. is a gentlemen of fortune, and while spending a few years on the continent, and when traveling by public conveyance in France, was often surprised with the great power and endurance of their horses, as used before their heavy and cumbrous diligences. It was not uncommon for four of them to perform seven miles within the hour, with from 12 to 14 passengers. Mr. H. was so well convinced from what fell under his observation, of their great superiority over the horses in this country, and that a cross of this breed on our mares, was best calculated to produce "the horse of all work;" uniting great strength, with sufficient activity for the road, the plow, &c. that he determined to import some, and make the attempt, and with this view, he accordingly purchased two stud horses and three mares. One of the horses died on the passage, and one of the mares had her leg broken on one of the cars at Jersey city. Nothing daunted by these misfortunes, and not willing to be foiled in his purpose, he sailed again for France in the same vessel, and returned with Diligence. Another of the mares died the next year, leaving a colt. Mr. H. has now a number of full bloods, as well as several half breeds, all promising to fulfil his expectations.

For a further account and history of this horse, I will refer the reader to the following, which appeared in the 9th No. of the VIth vol. of the Farmers' Cabinet:

"MR. EDITOR—I promised to give you some account of my horse Diligence, and of the race from which he springs, to accompany the engraving from Woodside's portrait of him.

"Diligence is of a handsome dapple-grey color, and measures 15 hands under the standard; he was purchased by his present owner in 1839, at the Fair of Guibray, a small village near Falaise, in Normandy, the birth-place of William the Conqueror. This fair lasts fifteen days; and being held in a district the most celebrated in France for the breeding of horses, and the first three days of th efair being devoted to their sale, it is resorted to by dealers from all parts of the country, particularly from Paris, for the supply of the diligences, and for post and carriage horses. This fair is largely supplied with the English breed raised in Normandy, and with its crosses upon the French stock, as well as with their peculiar race, (of which Diligence is a true type) called the Percheron, so universally used in the northern half of France, to draw the diligences and for post-horses.

"The orign of this race, according to French authorities, dates from the occupation of the Netherlands by the Spaniards, who introduced the Andalusian horse, which soon became the favorite stud horse all over the continent. The Spanish horse is known to spring from the Barb or Arabian, introduced by the Moors, on their conquest of that country. All who are conversant with the history of the horse know that the Andalusian has always been celebrated for his beauty, and for his great spirit, combined with extraordinary powers of endurance. The French horse upon which he was crossed, was the old Norman draft horse, which still exists in the country in all its purity; and is, perhaps, the best of all horses for slow draft.

"The average height of these horses is 16 hands, and they may be described as follows: head, short, wide, and hollow between the eyes; jaws, heavy; ears, small and pointed well forward; neck, very short and thick; mane, heavy; shoulder, well inclined backwards; back, extremely short; rump, steep; quarters, very broad; chest, deep and wide; legs, very short, particularly from the knee and hock to the fetlock, and thence to the coronet, which is covered with long hair, hiding half the hoof; much hair on the legs; tendons, large; and muscles excessively developed. Notwithstanding the great size and weight of the old draft horses, they are active. I have seen one of them draw sixteen large bales of cotton in the streets of Havre.

"If this account of the origin of the Percheron horse be correct, it would appear that the crossings with the Spanish horse was continued long enough to reduce, very considerably, the size of the old Norman horse; and that when the supply of Andalusian stud horses was cut off by the expulsion of the Spaniards from the low countries, breeding their progeny with one another has produced a distinct race, as well marked by character and qualities peculiar to itself, as any race of horses in Europe.

"Diligence was chosen as a full sized specimen of the breed, possessing all the quick action of the smaller horses, in order that his immediate progeny from our light mares might approach nearer to the true type of the race. It must be observed, however, that it is more in breadth and size of bone and muscle that he exceeds the standard, than in his height, which is very little above the average. The portrait, or still better, an inspection of the horse, will convince any one that this race is the origin of the Canadian pony, about whose valuable properties little need be said, as they are well known and highly prized in this section of the country, and still more to the north, where they have, undoubtedly, given that stamina and character to the horses of Vermont, New-Hampshire, and the northern section of New-York, which makes them so highly valued all over the Union as road horses; while it is a remarkable fact, that in those states where the attention of breeders has been exclusively devoted to the English race-horse, the carriage and the stage-horse is almost universally supplied from the North. It remains, therefore, for breeders to determine, whether it is not better to resort to the full-sized Percheron to cross upon our light and already too highly bred mares, than to use the degenerated Canadian, (degenerate in size only, through the rigor of the climate—for it must be admitted that the little animal retains all the spirit and nerve of his ancestors, and lacks strength only in proportion to his size). My own opinion is, that a due portion of the French blood mixed with the English, will produce a stock of horses invaluable, as combining all the properties that are required for quick draft on the road or the farm. I need not assure you who are acquainted with the success of Diligence as a stud horse in this place, that such, too, is the opinion of the farmers of New-Jersey.

"I have frequently been questioned as to my reasons for selecting this horse for farmers' use in preference to the English draft-horse. My reply has always been, that the draft-horse of England, whenever brought to this country, must prove a failure; he wants the go-a-head principle; he cannot move out of a walk; which is saying quite enough of him, without dwelling upon his defects of form, which can only be concealed by loads of fat, and not even then, from the eye of the horseman. The true Percheron, or Norman Diligence horse, on the contrary, combines more strength with activity than any horse I have ever sat behind. All travelers, on entering France, are struck with the properties of these horses as displayed in drawing the ponderous machine called a Diligence, by which they are conveyed through the kingdom at a rate fully equal to the average of stage traveling in this country. English horsemen confess that their road-horses could not hold out the same pace before the same load. But I will close this letter with an extract or two from an able article on the Norman horse, in the British Quarterly Journal of Agriculture.

"The writer, after giving an account of the origin of the horse, which agrees in tracing it to the Spanish horse (of Arabian ancestry) with the account I have given above, which I procured from French sources, says: 'The horses of Normandy are a capital race for *hard work and scanty fare*. I have never seen such horses at the collar, under the diligence, the post-carriage, the cumbrous and heavy voiture or cabriolet for one or two horses, or the farm-cart. They are *enduring and energetic beyond description;* with their necks cut to the bone, they flinch not; they put forth all their efforts at the voice of the brutal driver, or at the dreaded sound of his never-ceasing whip; *they keep their condition when other horses would die of neglect and hard treatment.* A better cross for some of our horses cannot be imagined than those of Normandy, provided they have not the ordinary failing, of too much length from the hock downwards and a heavy head.' I think that all who have paid attention to this particular breed of Norman horses (the Percheron which stands A No. 1), will bear me out in the assertion that the latter part of this quotation will not apply to them, and that on the contrary they are short from the hock downwards; that their heads are short, with the true Arabian face, and not thicker than they should be to correspond with the stoutness of their bodies. At all events, you can witness that Diligence has not these failings, which, when absent, an Englishman (evidently, from his article, a good horseman) thinks, constitutes the Norman horse "the best imaginable horse for a cross upon English horses, of a certain description.' This, coming from such a quarter, I look upon as high praise—a golden opinion. I would here observe, that I have seen great numbers of the cross upon the Norman mare by the English thorough-bred, and feel satisfied that they are of superior form and action for road-horses, and that many of them in the hands of our trainers would make fast trotters. Again, he says they are 'very gentle and docile; a kicking or vicious horse is almost unknown there; any person may pass in security at a fair at the heels of hundreds.' EDWARD HARRIS."

"Diligence" has made two good seasons in New Jersey, and been well patronized; and his colts are highly appreciated; one hundred to one hundred and fifty dollars, has been offered and refused for some of them, from good mares, when only one year old.

Pennsylvania was long celebrated for its large and beautiful team horses—the Canistoga breed. We also once possessed in this section, a low, heavy, square built, strong and tough horse, called the Dutch horse, in consequence of being bred and used by the Dutch inhabitants in this vicinity. They were truly the farmers' horse,—a large animal in a small compass, capable of great endurance, and keeping in good condition, with a small allowance of grain; powerful enough for the plow and sufficiently active for the road. Where are they now? Just cast your eyes over the horses before the farmers' wagons, as they arrive in the city, and see what a spindle-shanked, long legged, gaunt, unprofitable animal they now possess. They are too light for the plow or the road, and only fit for the saddle and light carriages. They have too much of the *racing* blood, the meanest of all breeds for the work of the farmer. We want to increase their weight, without extending their height: and I know of no horse, in my humble opinion, better calculated to accomplish the desired object, than Diligence; and I am gratified to have it in my power to say that he can be obtained for a season, if suitable encouragement be offered, by the farmers in this section. This can be determined by those who feel disposed to patronize him, if they will leave their names at the office of the Cultivator. C. N. BEMENT.

Three Hills Farm, Dec. 1842.

TO WESTERN EMIGRANTS.

READERS OF THE CULTIVATOR—My old Friends—During the last six or eight months you and I have held but little intercourse. To be candid, I did not imagine that my name would have been so much missed, as I am induced to believe it has been by what I am told in a great many letters that I have received. It is true, I had begun a "traveling memorandum," that I intended to have continued throughout all my journey, and brought you with me in imagination over the great northern lakes, and set you quietly down in the chimney corner of a comfortable and happy "log cabin home," where we could have looked back over the varied scene, and called up to view the many new acquaintances, and looked upon their various modes of cultivating the earth, and the many different ways of enjoying the fruits thereof, and then endeavored to find from observation where was the greatest amount of human happiness; for there, be it East or West, is the place to seek a new home.

Now I should have accomplished all this, and I am well assured should have added a little to your happiness, and thereby to my own; but I undertook to drive *too much team*. The consequence was, the connecting chains broke, and although I tried to "toggle" the broken links, it would not do, and there I have been stuck fast ever since.

Reader, let me here inquire whether you have undertaken, during the last summer, "to drive too much team?" Because, if you have, I am pretty sure there is "a link broken" somewhere. This is only another mode of repeating to you what I have often said before about cultivating too much land. I don't mean that, exactly, either; because you cannot *cultivate* too much. But do you cultivate it, or only own it? A great many of my eastern acquaintances want to emigrate to the West "to get more land."

Well, if that is all you want, I pray you come on. Here is plenty of land—good land, and cheap; and if to be the owner of 2,000 acres of good land will make you and your family happy, aye, even happier than they now are, why just bring along $2,500 and you can be the owner of two thousand acres of good land; beautiful land. But what is it worth without cultivation? Why just what half of your present farms are worth that are as uncultivated as the western prairies. That word "your" is wrong; because I am addressing myself to the *readers* of the Cultivator, who have, a great many of them, adopted an improved mode of cultivation. But I will say *the* farms of many of the uneasy spirits of the eastern states, who want to emigrate to the West merely because they want to get more land. Don't understand, by what I say, that I am opposed to emigration. No; like all the first settlers of a new country, I want to see it fill up; but I want it filled by a class of inhabitants that will feel every day, and every member of the family, as though they had bettered their condition by removing from the old homestead to a new and uncultivated spot.

How often do I see and hear the reverse of this. How often do I feel sorry for the fate of the feeble old grandfather and mother, who have been induced to quit all the comforts of the old homestead to seek for "more land;" to get a "bigger farm" in the wilds of the Great West. Singular and strange delusion, that bare acres of land constitute a farm. Let the old man stay at home; and let the young man, with a constitution made to endure toil and hard fare, come here and spend a few years of industry, actually cultivating the rich soil instead of doing as most of us do—"deviling over," and he will be sure to create a home, that to him in his old age will be as highly cherished as that of his father was.

The article under the head of "Western Farming," in the Oct. number, speaks to the men of capital at the East in words of truth, and shows them what may be done at farming on the prairies on a large scale. But men who

are able to do likewise, are able to live anywhere. But there is one thing certain; there is no more certain way in which they can invest their capital. Yet such are not the kind of emigrants that are the most likely to improve their condition so as to create an increased amount of happiness for their families; which I still argue should be the moving cause of every mover to the West. There never was a more favorable time for the emigrant than the present. During the rage of the speculation fever, many persons contracted debts that they are totally unable to pay without selling their farms; so that improved land can now be bought for a lower price than used to be paid a few years since for the bare "claim," before the land had been purchased of government. Stock and provisions are also low; and it requires far less capital now for the new settler to make a successful beginning with than it did a few years ago. But enough for the present. In my next, which I promise not to delay beyond reason, I intend to answer, in detail, a great variety of questions which have been asked me during the past summer, which will be interesting to the western emigrant.

Lake C. H. Nov. 1, 1842. SOLON ROBINSON.

COMMENTS ON THE SEPT. AND OCT. NUMBERS OF THE CULTIVATOR.

In the account given you by Mr. P. L. Simmonds, of the last meeting of the Royal Agricultural Society of England, there is nothing which should gratify an American so much as the two short speeches of our worthy and highly distinguished minister, Mr. Everett. They are most happy and appropriate specimens of the great eloquence for which that gentleman has been so long remarkable. When agriculture is thus honored it will become fashionable; and *this*, added to the vast aids which it is now constantly receiving from men eminent, in every part of the civilized world, for their scientific acquirements, will impart to it an impetus which nothing can resist.

The communication of your correspondent, Mr. R. S. Hardwick, relative to the Chinese tree corn, induces me to state my own trials of it. Three years ago I bought one ear for 25 cents of Mr. Thorburn in New-York; and selected it from a barrel which he had just opened. This evidently contained several varieties, but none of them of a very pure white. The prevailing color was a pale cream, with a slight tinge of pink. All the cobs were uncommonly small; but the number of rows varied from eight to twelve. Some of the grains approached the gourd seed corn in shape, whilst others were very hard and flinty; and to this great diversity I have no doubt we should attribute the very different accounts given of this corn in the numerous communications which have appeared in your paper. The ear which I selected was of the flinty kind, with 10 rows on the cob; but the produce appeared to consist of every variety I had noticed in the barrel from which I selected my ear. These varieties have not yet disappeared, although this is my third year of planting with seed, apparently of the same kind, as near as I could get it. The only change I can discover is, that the ears are somewhat larger; having generally more rows on the cob, and maturing a few days later. In our climate, (say about 37,) I am inclined to believe that it will prove a highly productive corn; as it will bear much closer planting than any of our larger varieties; producing more ears on a stalk, and ripens two or three weeks earlier. A writer in the April number of the Tennessee Agriculturist, which, by the way, is an excellent co-laborer in our cause, pronounces this corn to be "preferable to all others" to plant at the distance of 3 feet each way; but he does not mention how many stalks he leaves in a hill. I have planted 3 feet by 4, and have left from 2 to 4 stalks in a hill, which I have found to be not too thick.

The North Carolina paper, which attributes such wonderfully fertilizing effects to the annual burying of sweet potatoe vines, after digging the potatoes, is certainly wrong. It is true that this process will enable the same ground to produce good successive crops of this root for several years; but some other manure will at last be necessary; and this I assert from long continued observation and experience in their cultivation.

Mr. J. S. Skinner's remarks on agricultural premiums are worthy of the attentive consideration of all our agricultural societies; for I have never yet seen a scheme of premiums which was entirely exempt from the objections which he has so distinctly stated. They are too apt to favor *show*, without sufficient regard to the *cost* at which it is made, and to the general utility of making it.

I most heartily thank Mr. W. H. Sotham for his advice, as I hope it will at least soften his displeasure, (should he feel any) at my little comment upon himself. No offence whatever was intended, as I can truly assure him; for I am always gratified to see such practical communications as he generally sends you; and I rejoice at being now able to rank him among the approvers of my labors.

In all that your correspondent Quercus says of the benefit of green manures I fully concur; but I would prefer letting them dry before they were plowed in. Indeed, the use of them has been so long sanctioned by the best farmers, both in this and other countries, that the man who can now doubt their efficacy must be an incorrigible sceptic. But I must wish that Quercus had given a more intelligible description of what he calls the "Angola or Pigeon pea." I presume he cannot mean any variety of the Indian pea, of which there are at least 20 kinds in the southern states, and all produce more vine in land of the same quality than any imported pea that I have ever seen, and of course yield a more abundant growth to plow in. Another advantage which they have over the imported peas is, that the vines when wilted and stacked with alternate layers of any kind of dry straw, make as good long forage for cattle, sheep and work-horses as any that can be given to them.

The article signed "A Wheat-grower in New-York," contains more valuable information relative to the wheat crop than I have elsewhere seen in so condensed a form, and should be thoroughly studied by every inexperienced wheat grower in the land. I am particularly pleased with it, as it goes far, although incidentally, towards encouraging the practice of drilling wheat, of which, as it is now followed in several parts of Delaware and Pennsylvania, I have lately heard so many authentic and favorable accounts, as to induce a belief that drilling should generally be substituted for sowing broadcast. It has two great advantages over the latter mode: it saves seed, and by depositing them in the bottom of a little shallow trench protects them, in a great degree, from being thrown out by the winter frost, which by pulverizing the earth on the edge of each trench, adds some small portion of it each time to the roots of the wheat.

In your acknowledgment of certain presents from several of your correspondents in the Oct. No. I perceive there is one in which you have been so kind as to give me an interest. It is the seed of the "South American evergreen grass," presented to you by Dr. N. B. Cloud, of Alabama. Circumstances beyond my control, snd which I much regret, have prevented me from receiving in person the portion of this seed which you state that you intended to "divide with your friend Commentator." But it can easily reach me, if you will send it to our friend Mr. Ellsworth; and if Dr. Cloud will send, next summer, to the same gentleman, the seed of the same grass, as he proposes, I am confident that many others, besides myself, will be very thankful to him. All which I may receive shall be fairly tried and the results made public.

I will take this occasion to say, that of all the grasses from warm climates which I have ever yet seen, the Guinea grass appears to me the most valuable. In our climate it requires no culture after the first year; it stands drouth better than any other grass; and will bear cutting at least four times, at an average height, in good high land, of at least 2¼ or 3 feet. Another good quality is, that it grows taller in sandy land than any other grass yet known to us.

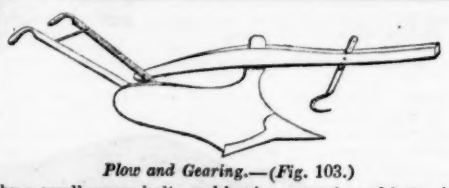
In the extract from Mr. J. King's letter from Iowa, he says—"there is no real cause for hard times." But, with due deference to his opinion, I must think that he himself has stated one, in regard to the reality and permanence of which, there can be no doubt in the minds of any reflecting man. It is neither more nor less than the constant "*president making*" by congress, which has existed from the commencement of our government to the present time; and has now reached such a baneful intensity as to occupy nearly their whole time, to the great neglect frequently of the most pressing exigencies of our country. All the political evils under which we have ever suffered have sprung, either directly or indirectly, from this prolific source; and heaven only knows when it will cease.

Your recommendation of sheep husbandry for the West will suit, unless I greatly err, quite as well for the East, since large portions of the atlantic states are admirably well adapted to this stock; from which I confidently believe that as large annual and clear profits could be derived as from any other stock. Their first cost may be reimbursed in less than a year; and then, with tolerable care, the yearly income from them will be fully equal, if it does not exceed the original outlay.

In your advice to substitute clover for sorrel, I should think that every good farmer would cordially concur; and I will venture to add that the suggestions of the "Maine Cultivator," about feeding sheep with the hay and the seed of this land-poisoner, can hardly be of any use, unless it be to those persons who are so unfortunate as to own lands which produce nothing else but sorrel. With us, it is everywhere considered a great nuisance, and never grows high enough to be worth cutting, even if any of our stock would eat it after it was cut. If the Maine farmers would lime their lands well, they would soon convert this pest into a manure by neutralizing its pernicious acid, and thus so improve their soil as to render it capable of producing any of our best grasses.

The inquiry of your correspondent at "Selim's Grove, Pa.," relative to the best contrivance for "turning over heavy growths of clover," reminds me of a very simple one recommended many years ago by your correspondent Mr. Garnett, in the American Farmer, whilst it was edited by Mr. J. S. Skinner of Baltimore. Having tried it myself, and found it effectual for the purpose, I will here endeavor to give you a correct idea of it by the subjoined sketch of a plow (fig. 103.) with the contrivance attached to it.

You will perceive that it is nothing more than an iron hook notched into the land side of the plow beam, and forming an obtuse angle with the front of said beam, which prevents all shaking. It is fastened to the beam



Plow and Gearing.—(Fig. 103.)

by a small screw bolt; and having a number of holes in it, may be raised or lowered according to the depth of the plowing. The flat part of this iron is about 8 or 9 inches long, 2 inches wide, and one-fourth of an inch thick. The curved part is round, about three-fourths of an inch thick at the largest part, and tapered to a blunt point. This curve should form a semi-circle about one inch wider than the plow-share, and should be so bent as to form a right angle with the flat part of the iron. It will thus move parallel to the surface of the earth, and three or four inches above it, when the plow is entered as deep as you wish it to run. The hook will then take in all the growth, (be it what it may,) which stands up the furrow slice, and by bending it forward, parallel to plow beam, will enable the mold-board to cover up the whole.

Under the head, "Sowing Clover Seed in the Fall," I beg leave to add to your information, that I have known it to succeed perfectly, in almost every case, between the latitudes 37 and 38, if sown at any time from the 1st of Sept. to the last of Oct. I have also known it to do so when sown among corn, even as early as the last working of it in August, and as late as the middle of November, if sown with wheat. It will not succeed of a dry spring on winter grain, unless it is harrowed immediately after sowing.

You have denounced the words "*can not*" in well merited terms; and you question whether there is another phrase in our language "productive of as much mischief." What think you of its twin brother—"*will not?*" I guess, as Brother Jonathan would say, it is "pull Dick, pull Devil," between them; for they are a matchless pair—if not to perpetrate evil—at least to prevent all good. Occupet extremum scabies, say I, of both of them.

The accounts which you occasionally give us of the agricultural societies of England and Scotland would be enough to sicken the hearts of all the true friends of American husbandry, were it not for the hope that such soul-stirring narratives may at least awaken throughout our whole country the same enthusiasm and ardor in agricultural pursuits which now evidently exists in those countries. Persevere then, gentlemen, I pray you persevere in giving us these accounts, and heaven grant that your highly laudable and meritorious efforts in our cause may meet with all the success they deserve. We have a country unsurpassed in natural advantages by any other in the world; and it wants only *their* full development to realize all the fondest, most sanguine hopes of the wisest, the best, and the most patriotic of her citizens.

Your correspondent, Mr. L. B. Armstrong, has bestowed on me a degree of praise so far above anything which even my own vanity can admit to be just, that it almost made me blush, although I was quite alone when I read it. Still I owe him my best thanks, which I here tender to him, for his very favorable estimation of my communications; and I shall most willingly comply with his request to state my opinions in regard to the subjects upon which he wishes to know them. But in the first place, I must protest against the opinions of Mr. Garnett, or of any other man, having "*almost the force of law*" with any person whatever. Indeed, I greatly mistake the character of that gentleman if he himself would wish it. In regard to his experiments referred to by Mr. Armstrong, I myself have witnessed similar ones with the same results; although it is very possible that Mr. G.'s reasoning and conclusions on them may be incorrect in some respects. This, however, cannot invalidate the facts of the case. In reference to Mr. Garnett's communication, I can think of no way to account for the facts which he there mentions, but one substantially the same that he has adopted. All the comparative experiments which I myself have witnessed between plowing in manures as soon as they were spread and postponing it for some time after spreading them in a state as little fermented as possible, have contributed to prove that the latter mode is best; at least, in regard to vegeto-animal manures; and of such only, I presume, Mr. G. was speaking. As to green manures, I have made no comparative trials with them in the two states of green and dry; but am inclined to believe from analogous reasoning, that to plow in the vegetable growth on land after it is dead, would be more beneficial than in its grown state. As to Mr. Garnett's opinion—"that it is always best to apply manures on the surface of land," it would have been more explicit if he had added,—and there to leave them until just before planting or sowing the crop they were designed to benefit. To state all the arguments in favor of this opinion would extend this already long communication beyond what I wish. I must therefore beg Mr. Armstrong to wait until another opportunity, if he still desires to see them. There is, however, another of Mr. G.'s opinions which Mr. A. deems unfounded, and upon which he asks what I think, that I will here briefly notice. It is, if I may infer it from Mr. A.'s remarks,—that all leaf-bearing plants, particularly trees, derive most of their nourishment from the atmosphere. Although this seems now to be the opinion of all the latest writers on agricultural chemistry and

botany, and particularly of that most distinguished of them all, the justly celebrated Liebig; yet I hesitate not to say, that the mere ipse dixit, even of Liebig, should not be admitted without some proof. They have given it, I think, in abundance; but I have not here room to cite it. The fact mentioned by Mr. Garnett, of the bodies of young trees, around which a ring of bark had been taken off, soon growing larger above the ring than below it, appears to me to be one proof, although not mentioned, I believe, by either of the writers alluded to. If Mr. G. imputed the whole of this greater growth to atmospheric influence, I think he was wrong; as the obstruction of the sap in returning to the roots was probably in part the cause. But Mr. A.'s case of a vein swelling when a man's arm is tied up to be bled, has no analogy to the tree case, if he will pardon me for saying so; unless, indeed, upon the supposition that one part grew in the earth; and that if our legs had a ring of skin taken off, all around them, the parts above the ring would soon attain a greatly disproportioned size.

In conclusion, I will venture to say, that if Mr. Garnett is the man I take him to be, he will be so far from thinking any of Mr. Armstrong's remarks "disrespectful to him," that he will be much gratified at the very favorable opinion which Mr. A. has expressed of him and *his* opinions. —

Mr. P. R. S.'s method of extirpating the toad-flax, snap-dragon, or ransted, as some call it, is probably the only effectual one; for it is perennial. It is the antirrhinum of the botanist. Some 8 or 10 years ago it was introduced into our garden as a beautiful flower, and I have been annually pulling it up ever since, but have not yet got rid of it. —

Our friend Solon Robinson's comparison of newspapers to mustard holds good in more respects than one. We often meet with preparations of the latter which are utterly worthless; and so we do of the former. We should therefore *examine carefully* before we buy, or we may get moral poison for our money, instead of a wholesome mental stimulant. —

I can assure your worthy and well informed correspondent G. B. S. that I am quite as averse to controversy as he can be; and had no other object in my former remarks about potatoe oats than to elicit farther inquiry relative to a grain which had been so long in high estimation among us, and certainly had very good looks in their favor, if nothing else.

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"A Wheat grower in Western New-York," whose communication is continued in this number of your paper will prove, if I mistake not, as good "a hand at the business" as any you have among your numerous correspondents; and I earnestly hope he will long be one of them. I would particularly recommend what he says of "chess" to your friend Mr. T. Hudson of Ohio, whose promised experiments I trust will be forth coming before next year passes off. Might I risk a prophecy without offence, he will convict himself of having entertained a very erroneous opinion.

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As Dr. N. B. Cloud has been pleased to mention me in speaking of the South American evergreen grass seed which he lately sent you, I will barely inform him, that some of the Musquit grass seed has been promised to me, and that I will certainly try the two together if I receive them. The result of the trial shall be published, whether it prove favorable or not.

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In regard to the culture of foreign grapes in the United States, I beg leave to state a single fact. Two or three varieties, the distinctive names of which I do not know, but which appear to be too tender to bare well in our climate, have grown most vigorously, and produced abundantly when grafted on our common native vines. In a single season I have known the grafts to grow 20 or 30 feet. COMMENTATOR.

SALT, POULTRY, &c.

FARMERS, SALT YOUR CATTLE IN THE WINTER.—I have long practiced salting my hay when put in the barn, and supposed that would be sufficient for the cattle during winter. But last winter, I kept salt before them constantly, and found that they consumed quite as much as they did in the summer, and therefore consider it as necessary.

LIVERPOOL SALT FOR THE DAIRY.—Some writer for the Cultivator has stated or suggested, that good butter and cheese cannot be made, by salting with Liverpool blown salt. For a number of years, we were of that opinion, and took pains to get the best rock salt we could. But for several years past we have used none but sack salt, bought as Liverpool, and we all consider the butter and cheese quite as good as when we used the other kind. It may take a little more in quantity, as it is lighter than rock salt.

TOP-KNOT HENS.—An inquiry is made in the last number of the Cultivator, for some genuine Poland or top-knot hens. Mrs. Langdon, my next door neighbor has one, and there may be others in the town. Some seven or eight years ago, I procured a couple of that breed of hens, male and female. I am confident they were pure full blooded topknots; they were said not to sit but once in seven years. As I wished to keep fowls for their eggs, and not for their chickens, I was much pleased with the description. During the two first years I succeeded without any difficulty, in raising about thirty, the number of hens I wished to keep. Not one of the full bloods offered to sit while I kept them. The part bloods would sit a week or ten days, but never long enough to hatch chickens. The top-knots first raised having become old, and not producing so many eggs as young hens would, and being more mischievous, (as it is well known, that old hens do not lay as bountifully as young ones, and grow naughty withall,) I tried for two or three years to raise more chickens; but from some fatality, not at all attributable to the kind of hens, I could not succeed in raising a single chick—got discouraged, and determined to keep no hens as they were troublesome to my neighbors, and last spring killed all but one half blood. She has layed all summer but never offered to sit.

I consider the top-knots altogether the most profitable hens for me to keep. As to feeding hens, I am fully satisfied they do not consume half as much grain, when kept where they have free access to it, as when fed to them daily.

Yours, C. BUTLER.

Plymouth, Conn. Oct. 29, 1842.

NINE PLAUSIBLE REASONS FOR SUBSCRIBING FOR THE CULTIVATOR.

MESSRS. GAYLORD & TUCKER—My destiny is to labor—to cultivate the soil—to obtain my "bread by the sweat of my brow"—Father Adam like—an honorable avocation. My hand is callous by the habitual and daily use of the implements of the farm, and more accustomed to wield the plow than the pen, which may account for all deficiencies in my communications.

But, notwithstanding all this, permit me to adduce a few reasons, which have been conceived while following the plow, or other ways engaged, *why farmers should subscribe for the Cultivator.*

1. Every farmer should subscribe for the Cultivator, and *read* it; because a vast deal of manual labor is unnecessarily expended, and completely lost; and a great extent of soil remains in an uncultivated condition, year after year; and benefits no one a farthing, merely for the want of the information, which an agricultural journal so abundantly imparts.

2. Men of most occupations through necessity, require reading adapted to their various pursuits.

The moralist must have his Advocate—the divine his religious periodicals, in order to keep up with the spirit of the times; and to learn the condition and changes in community; and the progress of the moral and religious world.

The politician, the lawyer, and physician, must read extensively; and devote much time to matters relating to their occupations, or they make little or no proficiency in their professions.

And shall not the cultivator of the soil, to whom the votaries of pleasure, and the whole professional class look for support, avail himself of the information, adapted to his pursuit, which he so greatly needs.

Now the Cultivator will furnish him with abundance of the necessary information, both theoretical and practical; and the result of experience clearly demonstrates that if he would be the most successful cultivator of the soil, and a connoisseur in agriculture, he should combine his experimental knowledge with what he reads;—and theory and practice should go hand in hand.

3. The stock of most farmers is improvable; and as it should be the aim of every one, to improve his stock of all kinds, and at the least possible expense to make it the most profitable, he can find in the Cultivator portraits of various animals, which in competition stand unrivaled; and all the requisite knowledge to guide him in matters relative to the treatment of cattle; and particularly to sheep husbandry.

He will find, also, in the veterinary department, prescriptions for the treatment and removal of most of the diseases, to which animals are subject.

4. There may be (as has been the case,) information in the Cultivator which may be the means of improving the condition of the farms of many—of improving their stock—of saving the lives of many neat cattle, and thereby enriching the pockets of the owners many hundreds of dollars.

To corroborate this assertion, I would refer to the testimony of Mr. Woodward, Cultivator, p. 68, who, speaking of agricultural journals, says, "could I have had the Cultivator, with the present light on the subject of farming, when I first commenced (eighteen years since,) I think it would have been more than $1,000 benefit to me.

Also, to the testimony of that enthusiastic and devoted friend to agriculture, COMMENTATOR, who, speaking of the value of your paper, says, "your two statistical tables, alone, would be a bargain at $2.00, could they not be obtained elsewhere."

Also, a writer in a back volume says, "your last number saved me *ten dollars.*" And another, "I consider each number worth a fat cow."

Need we more than this? Does any one question such testimony? The opinion of such gentlemen as I have quoted, *with me*, ranks *exceedingly high*—I can rest assured that they speak the unexaggerated truth.

5. The proper value of the various manures of the farm are not duly appreciated by the majority of farmers, because a correct application is not understood; and thus, much of the good effect, which it should produce, is lost *in toto.*

Now, much light is reflected through the medium of the Cultivator on the great subject of manures—much may be learned in regard to the manufacture of compost, &c. which is, in a great measure, the grand means of keeping the soil in its greatest state of productiveness.

6. From the earliest history of agriculture, until the present time, the implement most to be relied upon in tillage, because of its efficiency and almost universal application, is the common plow; and in the Cultivator may be seen cuts and descriptions of this, and other implements of great utility, such as the harrow, drill-barrow, cultivator, &c. of which all may avail themselves, in the greatest degree of perfection.

7. The Cultivator, wherever it circulates, is an *agricultural lecturer;* and by whomsoever it is perused, it scarcely fails to exert, in some degree, a beneficial influence on them; and where its precepts are practiced, and strenuously adhered to, the most unobserving mind would quickly remark the decided change that has been produced.

8. Each volume of the Cultivator is worth double the annual subscription to bind, and to place in an agricultural library, as a volume to which reference may be made, in relation to the various sorts of husbandry; and in fact, to every thing appertaining to the affairs of the farm.

It embodies a grand mass of facts, which in most cases are the result of long experience—it contains the improvements, which have been, and are now being made, in the cultivation of the soil; and, also, many in the mechanical department. It embodies the experience of many of the most scientific agriculturists of America—which alone, could not fail to render it valuable, useful and instructive to most classes of community.

It is not a publication of dignified pretensions, merely; but one of *unadorned verity—of extraordinary intrinsic merit*, which furnishes a rich supply of food, alike to the illiterate and to the man of science.

The plain and unaffected style of expression, in which the subjects are handled so meritoriously in the editorial department, is such that both old and young readily comprehend the idea, which the author would convey.

9. Modern agriculturists are annually making new improvements in the living science of agriculture; and men of science are continually enlisting in this noble work; and are bringing along with them boundless stores of useful knowledge; and by the light of science, are putting to flight those spurious and traditionary principles of antiquity, to which our ancestors adhered with such death-like grasp; and which were such insurmountable barriers to the improvements in agriculture; and they are evincing to the world, on principles strictly scientific, how barren soils, and those, which, by an injudicious system of management have become completely impoverished, may be resuscitated and restored to their native fertility; and they are publishing the result of their research and investigation, to the world, through the medium of agricultural journals. And now, if the farmer neglects to avail himself of the information, which his imperious necessities demand—if he will not awake from his stupor and arouse to a sense of his condition, from this chilling apathy of indifference and unmindfulness of the changes, which are transpiring around him, and engage heart and hand in promoting the great cause of agriculture, as the march is rapidly onward, he must content himself to sit down in ignoble ease and live unknown and die unmourned—to be a "*cat's-paw*" of artful speculators—a "hewer of wood and drawer of water."

These, MESSRS. EDITORS, are a few *general* reasons why every farmer should subscribe for the Cultivator; and I might easily double this number. But I trust, that these *only* will be sufficient to convince any reflecting person of the great advantage there is to be derived from, and the great need there is in the farmer's subscribing for the Cultivator, or some other agricultural work.

They will, also, deter any one from discontinuing their subscription, it is hoped, at the end of the current volume; and be an inducement for those, who are not subscribers, to transmit their names without delay. And in conclusion, let me request *every subscriber* to use his influence, when it is possible, to obtain one *new* subscriber, for by so doing, he will contribute very materially, towards promoting the great business of cultivating the soil; and through agricultural journals, in a great measure this noble work is to be accomplished. Truly yours, S. E. TODD.

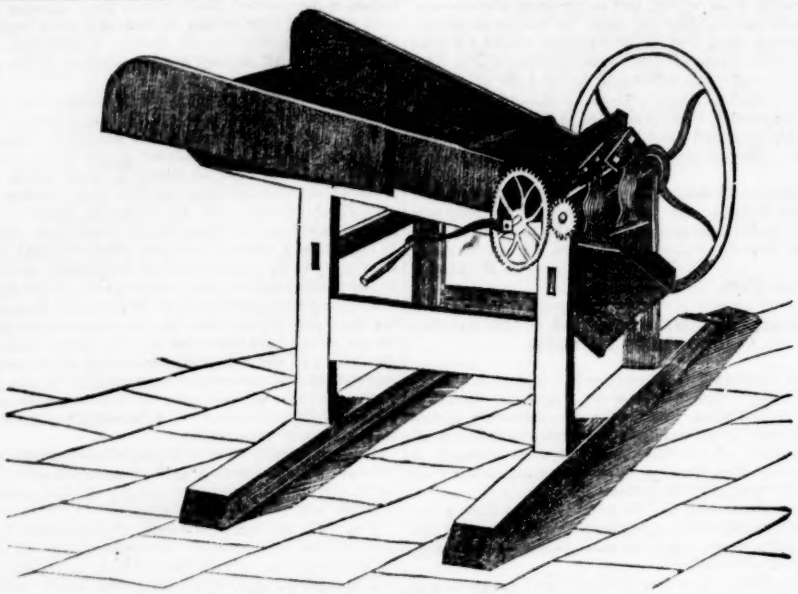
Lansing, Tompkins Co. N. Y.

PLOWING UNDER CLOVER.

MESSRS. GAYLORD & TUCKER—On reading in your No. for the present month the inquiry of your correspondent of Selim's Grove, Pa., and your answer, *on plowing under heavy clover*, I could not resist the inclination to tell you what I know about it. On experiencing the same difficulty mentioned by your correspondent some years since, I studied for, and found a remedy, viz: to the beam of Prouty's or Ruggles and Nourse's plow attach a circular cutter 8 inches in diameter. In land clear of stone, a cast iron one is as good as any. Mine is 1¼ inches thick in the centre for 2 inches of the diameter; then three-fourths inch, tapering to an edge. In stony soil, a ring of steel is made and put in the mold, and the center cast on it. The pin in all plow wheels should be cast steel. I do not know but the "star cutter" I saw at your office would do, but think not. Near the end of the beam attach a heavy chain; the other end doubled on itself, should trail in the former furrow, and will bend the tops of any green crop so as to cover them. I have seen Moores and Barnaby's plow work. It does well, but not as smooth as either of those above mentioned. I think Yankee ingenuity could attach the wheel to *that*, in such a mode as to do the work required. My plow does not clog twice in half a day on an average. The wheel walks directly through 3 inches of the surface, cutting all before it.

Norridgewock, Me., Oct. 11, 1842. JAMES BATES.

Murmur at nothing; if our ills are reparable, it is ungrateful: if remediless, it is vain.—*Lacon.*



BOTTS' STRAW CUTTER—(Fig. 104.)

MESSRS. EDITORS—In compliance with your request, we proceed to give you some account of the straw cutter which we exhibited at the Albany Fair, and to which the third premium was awarded by the committee on agricultural implements. For all the purposes of the farmer, we have no doubt of its being by far the best now in use, although we do not wonder that, under the circumstances, with every disposition and intention to do justice to all, the committee should have preferred others to it. In fact, the particular cutter exhibited at Albany was gotten up in great haste, and much knocked about from steamboat to railroad in getting it on in time for the Fair. The only wonder to us is, that, disjointed and out of order as it was, it should have attracted the notice of the committee at all.

We have said we believe it to be the best implement of the kind now in use; and we are inclined so to esteem it simply because, whilst it is equally efficient, it is more easily adjusted and kept in order than any other we have ever seen. Dozens of cutters had already been produced, operating with sufficient ease and rapidity for all practical purposes; but the misfortune has been that they were constructed by mechanics, and fitted only for the use of mechanics. After the first grinding, they have been found entirely useless in the hands of an ordinary laborer. In proof of this assertion is the well known fact, that notwithstanding the apparent perfection to which this implement has been brought in the last few years, these various improvements having been thoroughly tested by the farmer, have been found, almost without an exception, to require for their adjustment and management a degree of mechanical skill, of which he was not possessed. The consequence has been that they have been generally abandoned for the old fashioned cutter, in which the knife is forced by main strength through the straw—its superior simplicity more than counterbalancing its want of mechanical power.

Having these facts in view, the inventor of this knife spent some years in attempting, and finally succeeded, as he thinks, in obtaining a knife which unites the simplicity of the plainest with the efficiency and mechanical power of the most complicated. The knives are plain and straight, not wider than a common plane iron; they may be made by any smith, and ground and set by any laborer. In point of finish, the cost of workmanship has been expended rather in procuring strength and durability than high polish, which is so much out of place in such an implement. In these two most desirable points, strength and durability, it will compare with any implement made in this country. These qualities, with the peculiar construction of the feed, adapt it equally to cutting the finest hay and the coarsest stalks.

To this cutter has just been awarded the first premium by the agricultural society of Philadelphia, at their late exhibition; and the committee have been pleased, in addition, to recommend it particularly for the qualities we herein claim for it. At the South, where it is universally known and preferred, hundreds of certificates of its superiority can be obtained if necessary. It is retailed at $30 in Richmond, Va., where it is manufactured. BOTTS & BURFOOT.

Richmond, Va., October, 1842.

DRAFT OF PLOWS.

EDITORS OF CULTIVATOR—I have of late ascertained a mode of finding the relative draft of plows, which is of sufficient accuracy, if the land be level and free of stones; and the result will be readily understood being very simple, and within the reach of almost every individual.

The draft is found by taking a large pair of patent beam scales which hang up, and ascertain what weight will balance one pound on the end of the beam, which mark; then hitch the weighing hook to the clevis of the plow and the other to the doubletree, to which attach your team; then affix a cord to each end of a common or small pair of patent spiral scales; one end of the cord hitch to the end of your large scales, where the pound weight was put, the other end hitch to a staple in your near plow handle, minding to have the cord tied so as to have the large pair of scales stand ever ready for weighing; then start your team and if the cord be tied too long or too short, alter accordingly, until your beam works even; then note the indications of your spiral spring balance index, which also note on an average, as there will of course be some vibration, but none of consequence, if your land be proper. Then make your statement, if for example one pound at the end of your beam will balance 32 on the weighing hook, and your index of the spiral balance when plowing shows 8 as the average figure, then 8 by 32=256 pounds, the weight required to draw your plow, but if your index indicates 14 as the fair average figure, then 14 by 32=448. I have made this statement so that it should be perfectly plain, and it required 32 pounds on the weighing hook of the scales. I used to balance the pounds at the end of the beam.

You may think that on hitching on your scales with the beam on the land side would bring it to the ground, but the moment you start your team it will remain where you place it as to position. I have for a long time thought of some such plan, but never until of late have I found a plan so definite in finding the horizontal draft.

I am very respectfully yours, N. K. CONE.

P. S. I presume that a good machinist might make a pair of scales, so that with the spiral scales, the number of pounds required as draft might be graduated on the spiral scales, and so at once give the true indications.

Batavia, Oct. 8th, 1842. N. K. C.

CAPONS.

MESSRS. GAYLORD & TUCKER—I send you some remarks and instructions on the subject and manner of making "capons;" an art of which little is known or practiced in this country, considering the great length of time it has been followed in foreign countries. From time immemorial, it has been practiced in China, and for ages in France and England. Shakspeare speaks of Falstaff's lining his sides with good fat 'capon.' For its introduction among us, inquiry leads me to bestow the merit upon the Hon. Bela Badger, of Philadelphia, through whose exertions we are indebted, for a practical knowledge of the operation. In order to follow up the subject, so as to make it plain and intelligible to those who have a disposition to undertake the operation, it will be necessary to describe the table, instruments, and *modus operandi*, in the order stated. Although the operation is one of nicety, and in surgical language, bold and dangerous, yet any one possessing tact and intelligence, who will conform to rules hereafter given, may, after a few efforts, become expert in the business. Should he in his first endeavors kill one or two, before a knowledge of the parts are understood, or the use of the instruments become familiar, he need not be discouraged, but should persevere, remembering that practice will shortly subdue all impediments.

For simplicity, I will first describe the table and instruments, the *modus operandi*, and the advantages accruing therefrom. The table may be constructed of any kind of inch boards, 14 inches wide by 22 or 24 inches long; in height 4 feet. The height, however, may be at the caprice of the operator, yet it is well to have it of comfortable height, in order not to fatigue the muscles of the back by too great an inclination forward. The width is necessary for the purpose of holding the instruments. Proceed now to construct the appendages, necessary to confine the subject firmly upon the table. This is done by a strap with a lever running through it, and with an extensor. Make two holes in a direct line diagonally across the table; beginning 6 inches from the left hand corner, and about 4 or 5 inches from the margin—the space between the holes to be 3 inches in the clear. Pass through the holes a leather strap $\frac{3}{4}$ in. in width, by 20 in. in length, the two ends fastened. Below the table, and through the strap, run the lever 2 ft. long, by $1\frac{1}{4}$ in. wide, one end fastened by a movable joint to the opposite leg of the table. This is the lever, on which weights are affixed, which gives the power of firmly holding the subject by the wings. An old ax makes a good weight; it can be moved backward or forward on the lever; increasing or decreasing the power, easily, as required for the various size or strength of the fowl. The strap is passed over the wings, close to the body. Next, nail on the right-hand end of the table, about 4 in. from the corner, an inch buckle; put on a piece of leather, elevated a half inch above the surface of the table. Procure a piece of leather, to pass through the buckle, 6 in. long, punctured full of holes; at one end attach a small cord or thong, sufficiently long to form a slip noose, the use of which is to be thrown over the feet, around the legs, and down through the buckle. This forms the extensor. With the strap around the wings, the lever in force, the strap around the legs and extended, the subject is bound down, immovable by its own efforts. Thus you have the table and its appendages.

(Fig. 105.)

The instruments are next in order. They consist of 4 pieces as now made, but experience teaches me, they should be of six pieces, each separate, and not combined. They are the knife, tenaculum, canula, forceps, elevator and hooks. The shape and cutting edge of the knife is represented by *a*, fig. 105. A scalpel, however, of medium size, will answer all purposes. I prefer it. The tenaculum (*b*) is a valuable instrument. It should be six inches in length, gradually tapering toward the hook. The reflected edge of which should be made extremely sharp, as well as the point itself. The object of this being to cut instead of rupture the membrane, when you lay hold of it. This is not the case with the instruments in use; they tear it, instead of cutting it. The forceps (*c*) are round, six inches long, the fingers 4 in. the points square and closing perfectly tight. The canula is as its name imports, a hollow tube. Its length $3\frac{1}{2}$ inches. The inner walls of the tube must be smooth, in order not to cut the hair, as it is moved backward and forward through it. Two sides externally of the upper end are flattened, to convenience the grasp of the thumb and fore finger; the opposite lower point is indented to hold the testicle from turning, and also in order not to compress at once so closely the spermatic cord. The figure *d* is an attempt to show it with the horse hair looped and run through it. The elevator is required to press out to view the lower testicle, assist in passing the hair over the cord, to scoop out the blood, to lift the lower testicle out after discovered. Its form is shown at *e*. In length 6 inches. The bowl truncated, elongated oval, perfectly smooth, the edge rounded. The hooks are about one inch long, half in. wide; the hooks or lips a fourth of an inch. They are fastened pendulous to a split reed or bamboo, 6 inches long; one hook, however, is fastened only to both split ends of the reed, a ring runs over the reed, with the view of increasing the elasticity or expanding power, drawing further apart the lips of the incision. The two figures will convey an idea of them, and their use—*f*, bent, *g*, straight. Their use is to draw apart the ribs, after the intercostal muscle is separated, so that the operator can have a fair view of the testicles, as they lie in the cavity of the abdomen. This description completes the instruments employed in performing the operation. The Chinese use brass, the French steel, silver and brass. Their instruments are combined, the elevator and tenaculum are one piece, made at each end. This is objectionable in the highest degree; the tenaculum is required while the elevator is in use. The knife and forceps are attached also, but they are decidedly more convenient when made separate. The cost may be slightly advanced, but this is but a small item in comparison to the advantage gained. German silver makes very neat and cheap ones, better than brass or steel.

I come now to the second point, the mode of performing the operation. Before proceeding I make a general remark: upon its adoption depends the success of the operation, as well as in a measure the life of the subject. It is this. In all cases, in every instance, it is absolutely necessary, that the fowls should be confined in some convenient place at least 36 or 48 hours, without either food or drink. The object of this treatment is to reduce the fulness of the intestines in order to proceed safely, to lessen the momentum of the circulation, and reduce the vascular action, so that healthy granulations will form without dangerous inflammation. Perhaps the principal object to be gained is in the reduction of the contents of the intestines. The parts necessary to cut through, in order to expose to view the testicles, are the true skin, intercostal muscle, internal-costal muscle, and periteneum. Place the subject on its left side upon the table, its back being toward the operator, the strap thrown around the wings, and the slip noose over the legs, then pluck away the few feathers over the space of the first and second ribs; with the left hand, thumb and finger, draw the skin tense, ascertaining positively the situation of the space between the ribs—then with the scalpel in

the right hand make a single cut, through the skin only, about one inch long, measuring from the point of the first rib backward. This exposes the two ribs, and margin of a large muscle running down the thigh. This muscle is not in danger of being injured, if the proper point is ascertained where to make the incision, but if otherwise, an injury to it will cause lameness. Divide the muscle between the ribs by introducing the knife at the point of the first rib, and cutting backwards; this about one inch. In this way the plura is avoided, and of course an escape of air. Introduce the hooks, which will by the power of the reed draw apart the ribs and expose a bundle of muscular fibres, which is the internal-costal muscle. Should the incision be too small it may be enlarged, by passing the knife around the point of the second rib; this will divide the ligamentous connexion between the two ribs. Divide the belly of the internal-costal muscle longitudinally. This done, a thin, delicate semi-transparent membrane is seen, which is the peritoneum, and must be divided also, taking care to cut as far from the plura as possible; a branch of the ceolic artery traverses this membrane, and may be injured by carelessness. On passing through the peritoneum, the upper testicle is brought distinctly to view, lying on the margin of the lateral spinous processes, surrounded by nerves and blood vessels. It is a small yellow body, its color somewhat darkened by the membrane covering it. Introducing the elevator and pushing towards and downwards the intestines, the lower testicle is seen, somewhat diagonally to the other, lying centrally between two large blood vessels. On elevating it with the elevator it comes in contact with the membrane; the lower blood vessel then is obscure. This vessel is the mesenteric vein that lies between the two testicles; contiguous to the aorta is the descending vena cava. Proceed to remove the lower one first, in all cases by rupturing or lacerating the peritoneum, or that part of the membrane between the two large blood vessels. This is done with the tenaculum. The operator cannot be deceived on this point; wherever the membrane is divided, the testicle presents a shining or bright yellow. After dividing the peritoneum, introduce the canula and hair, carry the hair into the rupture, then pass the elevator under the testicle, in the loop of the hair—with the canula close against the body of the testicle, draw the hair tense, when if the elevator and canula be properly adjusted the hair catches the chord over the testes. Leaving the elevator remaining under the testicle, holding the canula with the left thumb and fore-finger—bearing it slight against the spermatic chord—with the right thumb and fore-finger hold of the knot formed in the hair, the 2d and 3d fingers passed through it, give it a sawing or rotary move, which will soon divide the chord. The elevator or forceps will raise it out. The upper one is removed in nearly the same way. To rupture the peritoneum, use the forceps, instead of the tenaculum, as is recommended in removing the lower one; and cut it with the scalpel near the center of the testicle. There is generally a slight connection of the upper part, with the diaphragm or midriff: it may be loosed with the knife. The edges of the wound are simply drawn together with a needle and thread, a single stich. The difficult part of the operation is in removing the lower one. But the real danger is in removing the upper; as, contiguous to, separated only by a few lines lies, the aorta, the large arterial vessel, sending blood continually to nearly every part of the body. The spermatic arteries come from this large trunk—their use is to convey arterial blood to these organs—the artery of this testicle being much shorter than that of the other, the divided edges of the artery, or more properly speaking the contractile power of this vessel is overcome by the momentum of circulation, and hemorrhages occur that destroy life in a few minutes. Should this occur it will take place before a coagulum forms capable of making further resistance than the natural contractile power of the arteries themselves; and the operator at once sees the sacrifice of his capon, (much to his sorrow if he has an anxiety to succeed, aided by a zeal and laudable desire to spare life after inflicting so much pain,) by the great flow of blood. The arteries of animals as well as human, possess a contractile power peculiar to their construction, the inner coat is muscular, the muscular fibres running in circles. On laceration these fibres shorten by irritability, and hemorrhage is stopped in consequence. As soon as the operation is done, release the subject and let him run; if he lives 10 minutes after, or even commences feeding, the rubicon is passed.

The advantages gained are many. A change of habits takes place. They are great feeders and fatten readily. The male fowl in his natural state takes on fat slow—eating more than their value in market in grain. It is allowed that one of them will consume easily 3 pecks of Indian corn, to say nothing of other condiments, and after this consumption nothing to boast of. The capons become extremely fat, perhaps to many unaccustomed to eating fat fowl, not very palatable. The flesh is more juicy, delicate and soft, highly prized by good eaters and epicures. They command double price in the market. An acquaintance of mine last winter sold 12 pairs in the Philadelphia market, for $5 per pair; they weighed from 18 lbs. to 21½ lbs. per pair. They grow larger. The difference is as perceptible as it is in the bull and ox. They resemble the Berkshire in the facility with which they fatten. Are quiet and gentle, enormous feeders. These are the peculiar advantages gained by the operation, sufficient in my opinion, to induce any one possessing means and disposition, to undertake to caponize. The female may be operated upon also, with the same apparent change in the organization and orgasm, the opening to be made in the opposite side. As a different organization exists between the male and female, a description of the modus operandi will not now be attempted. As your patience must be exhausted, if you have followed me thus far, I will in charity to you, recompense you for your attention, and close.

Accompanying this communication, or following it I fancy, I send you a pair of capons. One about 12 months old and the other 5 months. The oldest is of the mongrel breed, the other of the common Dominico. The first was not emasculated until he had obtained near his full growth; hence the difference in his size is not so great as with the other, who was emasculated when quite young. As a general rule a capon will weigh double the weight of a male of the same breed. They are not fat; they have not been fed, but have always worked for their own living. If convenient, please exhibit them at the fair, after which they are at your disposal, if they are worth an acceptance. Fat them well against the holidays, and if your inclination and taste prompts the sacrifice, you may feast on good fat capon.

Yours, most respectfully, J. N. KEELER.

Mulberry Farm, N. J. Sept. 4, 1842.

WORKINGMAN'S COTTAGE.—(Fig. 106.)

MESSRS. GAYLORD & TUCKER—I send enclosed, the plan of a second cottage. It can be introduced into my "*Working Man's Establishment*," (see Cult. vol. IX. p. 161,) without any material change as to the grounds or other buildings, and will be preferred by many to the one there presented. The main building is a perfect square, and consequently, as economical in its structure as it can be made.

The drawing, (fig. 106) is a representation of the cottage, as seen in perspective. The beauty of its exterior would be greatly enhanced by the addition of porticoes, a verandah, &c. with the windows of the drawing and dining rooms, made to extend to the floor. Nor are these mere ornaments. In a climate like ours, they are the source of no little comfort and convenience, in affording us a place where we may regale ourselves of the cooling breeze, secure from the intense heat of the summer's sun, or what is still worse, (at least for health,) evening dews.

Ground Plan.—(Fig. 107.)

The main part of the building is 36 by 36 feet. The addition in the rear is 18 by 24 feet. Every additional foot to its breadth and width will give a proportional enlargement to each room.

I deem it unnecessary to give a plan of the second story, as most would prefer the ground plan. That would give three spacious sleeping apartments, 18 by 18 feet, with a bedroom 10 by 18 feet. R. NORTH, JR.

Berlin, Conn. Aug. 10, 1842.

SHEEP HUSBANDRY.

MESSRS. EDITORS—Having had some experience in the business of wool growing, I propose advancing some of my views upon that and kindred subjects, which have been gathered from various quarters. Some twenty years since, the citizens of the contiguous county, (Washington,) began to turn their attention to the subject of growing fine wool as a staple article, so that by 1836, it had become the most important business of the county. In 1833, large and fine flocks were introduced into this county, but the falsely so called compromise act, passed over us, and now few are left to tell the tale of former times. Protection being withdrawn from domestic manufactures, they could not afford what seemed a remunerating price for our wool; consequently our flocks have mostly disappeared, and thus have remained unemployed the facilities of Pennsylvania, which are equaled by those of no country in the world. We have in this state millions and millions of acres of land in our mountains, (which occupy three fourths of the state,) which are suited for nothing else than grazing sheep in summer; it is poor, rugged and rocky. I have for some years kept from six hundred to a thousand sheep for four months in the year, upon land so poor as scarcely to yield a vestige of grass; yet they would return in the fall of the year in a much finer condition than the most luxuriant pasture in the lowlands could have made them. You ask, how can that be? The high mountain and cold clime is suited to their nature, the low stunted bushes afford them food more acceptable than grass, and at the same time afford a shade, which enables them to feed throughout the day, instead of being driven to the shade very early in the morning. So apparent were these advantages, that in prosperous times, flocks have been driven the distance of seventy miles to mountain range. I make these statements, so that others similarly situated may turn their attention to the subject and improve their advantages. Some years' experience in the business warrants me in the belief, that the most luxuriant lowland pasture is not equal for sheep, to the most indifferent mountain range, when covered with bushes. A fair market for wool would in a few years make Pennsylvania one of the largest wool growing states in the union. Our mountains may become to this country, what the Highlands are to England and Scotland, and the mountains of Spain, Switzerland, Germany and Cachmere, are to their respective countries.

Where a farmer can keep a certain number of sheep, he will soon see the advantage of keeping as many ewes, and raising as many lambs as possible; these last cost nothing till the beginning of winter, and they are then as valuable (age and place considered,) as old sheep. This plan enables him to keep a young flock, and to sell off a corresponding number of old sheep every year, (which should of course be wethers.) The farmer on this plan may have each year one third lambs, for the whole number of his flock.

Three years since, I tried the experiment of a new way of washing sheep, which proving effectual, I have since retained. My shepherd brought it from Scotland, where the plan generally prevails. You and others will be as sceptical as myself, in regard to the efficiency of the mode before trial. I select on a creek a place where there is a current, with a bank four or five feet high, and the same depth of water; a pen is built about thirty feet long, being narrow near the bank; a scaffolding four or five feet high above the surface of the water, over which the sheep are driven three or five times: half a dozen being driven over, the others follow without trouble; they should swim about twelve feet, not more, and come out on a sandy or clean beach. My experience is, that by this plan they are not fatigued half so much as by washing by hand, and the wool is as well washed as by hand washing; two hands may in this manner wash eight hundred in a day. In this matter, as in many others, experience will demonstrate what theory will condemn.

In passing let me touch a popular error in regard to the comparative weight of common and Merino sheep. The former are generally kept in very small flocks, and have the range of a whole farm, nipping close what cattle cannot reach, whereas the merinos are kept in large numbers generally, and have not the same advantages. Having many low grade sheep when I established my flock, the coarse sheep would not thrive with the others, and I could select the poorest by picking the coarsest. I have little doubt that the Merino with the the same fare, will weigh as heavy as the common. As to comparative health and endurance, it is in favor of the fine sheep; for several years my loss from all diseases averaging from one to two per cent. As a general rule, I believe that the animals of this country are less liable to disease than those of the British Isles, perhaps owing to our drier climate, and becoming hardier by being left to shift for themselves, and following the prescriptions of nature rather than those of quacks.

I must congratulate you and your readers, upon your good fortune in obtaining the able correspondents, who have given us practical information upon the important subject of sheep husbandry. More information from them on this subject, and more protection from those who are appointed to watch over the interests of the country, and this will become one of the most important interests of the country. All we ask from government is protection for a short time, till our infant manufactures shall have acquired skill and capital sufficient to sustain themselves. The stability of government as well as of the currency, is more surely promoted by a domestic rather than foreign trade, especially when the vast variety of climate and soil, can furnish us with nearly all

the articles of commerce which foreign trade now supplies; dependent in trade we must be dependent in policy. While we have the elements of independence, honor, pride and policy, all should impel us to the attainment of so desirable an object.

Yours respectfully,

G. E. H.

Brownsville, Fayette Co. Pa. Aug. 19, 1842.

RENOVATION OF SOILS.

"THERE is in the constituent particles of soils a constant tendency to more minute division. By continual tillage, and the concurrent action of salts, manures, and frost, this division may become so extreme, that at length a soil may be reduced to a fine powder or dust; in which state it will be destitute of substance, and cease to be productive; the rain falling upon it will convert it into mere mire or mud; and this being hardened by the heat of the sun, the air will be excluded, and the roots of plants will be wholly unable to fulfil their functions."

"All these soils,' (for instance, where 45 parts of 100 is clay,) "are unproductive, and become adhesive and clammy when wet; the water which stands upon them is uniformly turbid and whitish, and particularly so when it is agitated by wind; the effect of heat is to contract and crack their surface, to make it hard, and render it impenetrable to the plow; nor can they be made to any considerable extent productive, *but by the liberal application of coarse undecomposed manures*, and especially *by plowing in crops of buckwheat when in flower*."

It is not my purpose to discuss the question of *renovating soils*, for it has often been ably treated in the columns of the Cultivator; but to state the result of an experiment in wheat culture, on a soil approximating the above description, quoted from that sterling work of Chaptal, on Agricultural Chemistry. The soil was rather a stiff clay, and having been some thirty-five years in arable condition, and for much of the former part of this time very productive of wheat, it had been, for want of a knowledge of the benefits of the "rotation system," sadly abused. In 1838, it was summer fallowed, having laid the four years previous to sheep pasture, but the crop of wheat which followed, was very ordinary, not yielding ten bushels to the acre; which in part arose from the adhesive and clammy nature of the soil, causing the frost to heave a very considerable proportion of the plants on the surface to perish. This is well known to be a very common occurrence, in our climate, with heavy clay lands, if sowed late; but this was not the fact in the last particular, and the growth in the fall was beyond an average. After the crop was harvested, I observed on all parts of the field, numerous cracks on the surface, to a much greater extent than is usual with similar soils. I contemplated giving the field a heavy manuring the following season, and plant with corn; but subsequently changed my plan, having resolved to adopt the course recommended as above, by Chaptal. I consequently applied about twenty-five large cart loads of coarse, unfermented manure, drawn from my sheep barns, to the acre, which was spread no faster than the plows would cover. The plants in the fall, assumed so dark a green, that I was a little apprehensive of the usual rank growth before harvest, which almost invariably follows the direct application of manure to the wheat crop, as well as large disproportion of straw to the berry. But doubtless owing to the great poverty of the soil, these results did not follow. The field averaged over twenty bushels to the acre, which is about the average production of well tilled fallow land, sown timely, and in favorable seasons, in this immediate quarter. The coarse manure had evidently effected a material modification of the soil, as few cracks were distinguishable on the surface, after harvest, showing most clearly, that it was more friable. It is a year ago last spring, since the grass seed was sown upon it, and a more luxuriant covering of clover, I have rarely seen, than the field now presents; which is another proof of some renovation of the soil, otherwise, very much of the clover would have been thrown out by the frost of last spring. It is my present impression, that if this field is permitted to rest for two or three years longer, and then sowed with buckwheat and plowed under when in blow, preparatory to wheat, in consideration of what has already been done, its original fertility will be nearly restored, and in some measure the adhesive and clammy texture of the soil destroyed.

But while on this subject, I beg leave to enter a protest against applying manure—except compost—directly to the wheat crop; unless as in the above case, when the soil is rendered quite unproductive, by long and "skinning" management, before agricultural periodicals taught us better. You will permit me to quote your remarks, gentlemen, on this point—for I am quite sure they cannot be kept too much "before the people"—from the 7th vol. of the Cultivator, taken from a sterling article on "Wheat Culture." "One of the greatest evils of direct manuring for the wheat crop, arises from the liability of the grain so manured, to lodge. The rapid growth of the stem, renders it unable to support its own weight, it is soft and flexible, contains much less silex than those grown in a poorer soil; the wheat does not usually perfect its berry, and at all times, from the thinness of the skin or cuticle, it is more liable to mildew and rust. These things render it certainly unadvisable, unless the land is very poor and reduced, to apply unfermented manure to wheat." My own experience, as well as thousands of others, in times past, will attest the truth of these remarks. As nearly as possible, my practice conforms to the "rotation system;" and apply my manure in an unfermented state, to my corn and potatoe crops, and top dressing of meadows. On the last point, I shall have something to say in a future number.

L. A. MORRELL.

P. S. My compliments to "*Commentator*," and can assure him, that when "I justify a boy for *striking his daddy*," when he catches him feeding to his sheep, *oats in the sheaf*, I mean to be understood only in a "Pickwickian point of view;" nothing beyond that, most certainly.

Lansing, Tompkins Co. Nov. 1842.

WORMS.

MESSRS. EDITORS—There has been a general complaint this year in a large section of country, that many kinds of field and garden crops have been either wholly destroyed, or materially damaged, by worms. It may be well to again remind your readers of the advantage of fall plowing. I am practically convinced that if the land be turned over late in the fall or in a winter's thaw, it will destroy a large portion of these depredators that burrow in the earth. Worms, like many other insects and animals, prepare for winter quarters; and if their domicils are routed just before the ground freezes, it gives them no chance to again secure themselves, and are therefore destroyed.

There are three kinds of worms which appear to annoy us more than all the rest. One of these is the *wire worm*, which is very injurious to Indian corn, oats and potatoes; when full grown it is nearly one inch in length, of a yellow color, hard and shining. "It is said to remain in the ground four or five years; then changes to a long slim bug, commonly denominated the *snapping bug*; after depositing its eggs in the earth, perishes within a short time."

Another of these lawless insects is the *white grub;* they are the large worm with red heads that prevail in our meadows, frequently eating off the roots of grasses so completely as to easily turn over large tracts of turf of almost any size. Both these and the wire worm confine their ravages beneath the surface, never showing themselves above the earth until the last transformation is undergone, and the perfect insect produced. "These grubs are said to remain in the ground four years;" when transformed to a perfect insect, it appears in the habiliments and shape of a large brown bug, which rises in the month of May and June in countless numbers at twilight from its hiding places in the earth. Many fields of potatoes were nearly devoured by them this season.

The cabbage or cut worm is an insect when full grown from one to one and a half inches in length—not so large as the grub worm, of a brown or grey color, when they penetrate the soil so deep as not to be effected by the sun's rays; but if they lodge through the day very near the earth's surface, a warm sun will tan them a black color. This worm does his mischief nights and cloudy days; it preys upon the leaves and stalks of the cabbage, sugar-beet, corn and other tender plants. They burrow in the most convenient spot, near the roots of the vegetables where their food abounds, and may be readily found by disturbing the soil near where they last feasted.

In most soils where worms are found clay more or less prevails; if designed for early tillage in the spring, it forwards the work to plow the land in the fall, when the team is better able to do the work, and the weather not so relaxing. No matter if the soil be wet and stiff when turned over. The exposure to the mellowing influences of winter will wholly deprive the soil of that stiff cohesion; a general decomposition of soil and sod takes place in time to benefit any early spring crop. In spring season it may be again planted as late as May or June. Frost is one of the most powerful pulverizers that can be made to operate on a clay soil, which is poorly fitted for a crop when disturbed in the spring, unless it is inverted in a suitable condition; that is, when neither too wet nor dry.

Beneficent Providence has given us bountiful crops; and although they bear small prices, I presume all those who have been attentive readers of the Cultivator have been remunerated the full cost, and will be ready to send you another dollar in season, that you may be encouraged to publish your valuable paper another year. Those who carefully lay up each number have enough in two years to form a handsome and valuable book if bound.

Yours, S. W. JEWETT.

RATS AND MICE.

MESSRS. EDITORS—As rats and mice are often a great annoyance to farmers as well as others, I will state my method of getting rid of them. Having tried dogs, and cats, and traps, and fishhooks to little purpose, I procured the plant *Hound's Tongue*, by some called *Tory Weed*, the *Cynoglossum officinale* of Linnæus, which, it was said, if gathered when full of sap, and bruised and laid in places infested with rats and mice, would cause them immediately to quit the premises. This is a biennial plant; and puts out a purple blossom in July, and may be found on almost every farm. I bruised both the root and stalk, and found that these vermin would quit the immediate vicinity of the plant, but not the whole building. Whether they ate any of it, or whether if they had eaten they would have been poisoned, I was unable to determine. I gathered a quantity of the plant and left it in various places about my house, barn and outhouses, and it had a sensible effect, but was not a universal exterminator.

I then purchased 12½ cents' worth of arsenic, spread a little butter on some bread cut very thin, sprinkled it over with arsenic, and cut it in pieces of the size of a cent; these I put into the holes about my house and barn most frequented by them, and they immediately quit my whole premises, and I saw no signs of a single one for about a year. The stench from a particular place indicated that one at least had been poisoned. That, however, was soon gone. On the return of a few about a year afterwards, I repeated the experiment with arsenic just as before, with the like success. In this way, repeating the experiment once or twice a year, I have got rid of these troublesome vermin for five years; and I have enough left of my first purchase of arsenic to last two or three years more. It is seldom, I believe, that they eat it so as to be killed; but they regard it as their mortal enemy, suspect imminent danger when it is near, and immediately with one accord quit their landlord for his good. It is not improbable, however, that they will pay their respects to some neighbor, who is always fretting and complaining about them, and yet never doing anything effectual to destroy them; and there are a plenty of such. But let that neighbor do as I have done, and I will warrant him success.

In thus clearing your premises of rats and mice, you need not poison your wife or children, cats or dogs, or anything else. Just put the pieces of bread *into* the holes where they come out, and you need apprehend no danger.

H. A. P.

IMPURE WELL WATER.

THE water of our well has recently become exceedingly nauseous, so that it is hardly fit for use. The well has been *thoroughly cleansed*, and the mouth well secured, so that impurities cannot find their way into it. The water has been pumped out time and time again; still all our labor is vain. The water contains a large quantity of sulphate of lime, and is, consequently, *very hard*.

By what process may it be rendered pleasant? and to what cause may its impurities be ascribed?

Information on this subject would be gratefully received by your constant reader and friend,

Lansing, Tompkins co., N. Y. S. E. TODD.

The disagreeable taste and smell of the water complained of by our correspondent is doubtless owing to some improper matter in his well, which merely pumping out the water does not remove. Two years since, the well of a friend of ours, which had always before given excellent water, became nauseous and unfit for use. Pumping it out was of no avail. It was suggested, that as the soil in the vicinity was full of the earth worm, enough might have found their way into the well to affect by their decomposition the quality of the water. The well was emptied, and nearly half a bushel of these worms were found at the bottom; some sound, but many dead and decaying. The cleansing given was effectual. We have known several similar instances from the same cause, although it may not be the difficulty with the well of our correspondent. The hardness of the water could not injuriously affect it; as throughout the whole lake country, the water is of this kind. Since writing the preceding, a friend informs us that he has known several instances in which the nauseous taste of water in wells has been at once corrected, by throwing a few quarts of salt, say six or eight, into the well.—EDS.

SHEEP HUSBANDRY—INQUIRY.

MESSRS. EDITORS—Having noticed several communications of late in your valuable paper, in reference to Paular Merino sheep, and particularly one from Mr. Avery, of Galway, in which he gives an account of several heavy fleeces, also of the average of his flock, I feel anxious to have Mr. A. inform the public in reference to his mode of treating his sheep in general, and their feed in particular. Also in reference to the comparative profits of the Paular, and the other varieties of fine wooled sheep which he has formerly kept. What is the effect of crossing them with other varieties; say the Saxony, Merinos, and the coarse long wooled sheep? I presume the author of the communication is the Rev. R. A. Avery, who formerly preached in this Co. I should place implicit confidence in any statement which he might make, and am confident that a full answer to the above from him would be regarded as valuable information by more than one. INQUIRER.

Washington Co. N. Y. Oct. 31, 1842.

MILCH COWS.

EDITORS OF THE CULTIVATOR—The fair of the State Agricultural Society, held at Albany, in September, was a very brilliant exhibit of improved animals, vegetables, fruits, &c. &c. as stated in the Albany papers. My son was on a visit with his family, in Connecticut, which prevented either of us from attending the fair. I lamented much, that he could not attend it, as he has a taste for agricultural pursuits; particularly for the improved breeds of the animals composing farm stock; and I should have been highly gratified to have been at the fair, but other duties required me at home.

The specimens of fine cattle were superb, as stated to me, by a gentlemen who exhibited some of the finest. He remarked, however, that none of the cows shown, gave milk.* They were trained and exhibited merely as samples of symmetry and beauty, in high condition. All this is fine, and very valuable; but, I ask, whether usefulness and profit, in all agricultural relations, ought not

* This is a mistake. Most of the cows exhibited gave milk, and there were among them some of the best milkers in the State.—EDS

to be among the first objects of such a fair? A good milker, if not the first quality among good cows, is certainly the second. Beauty and usefulness combined, constitute the highest consideration in farm stock.

If it could be said, with truth, that the most beautiful cow gave more and richer milk than any other cow, she would be of greater value than any other cow. The preference with dairymen would be, for the cow that gave the most and richest milk—hence, those qualities should be the object of the exhibitor. Respectfully,

DAVID TOMLINSON.

Schenectady, Oct. 3, 1842.

Domestic Economy.

PRESS FOR WORKING OVER BUTTER.

SMOOTH, as perfectly as possible, a piece of hard wood plank, 18 inches wide and 24 long. On both sides and end, nail pieces of board, rising one inch above the surface. Near the open end screw in a small ring-bolt; or what is better, three; one at each corner and one in the center. Let the ring on the bolt be one inch in diameter. Make a brake 30 inches long, 9 inches of which is for the handle. Let it be 3½ inches wide, 1¼ thick; one edge made sharp, and the other rounded. On the end to go next the eye-bolts put a ring, and in the center screw a bolt with a head, which will just slip through the eye of either of the ring-bolts.*

Need I say more? The rest is plain. Give the end next you a slight elevation; and by using the brake as a braker does his, and by changing as occasion requires, all the milk may be worked from butter with a trifling labor.

A marble slab would be preferable, as the butter would stick less to the surface. A small wooden shovel 3 inches square, with the edges perfectly straight, should be at hand to keep all in place. JAMES BATES.

CURING HAMS, PORK, &c.

MESSRS. GAYLORD & TUCKER—As the time is drawing nigh when the farmer is again to secure his stock of meats for another year, and as I consider the knowledge of curing meat for "home consumption," very essential to a farmer, and as the many receipts, &c. which are already extant are more or less expensive and laborious, permit me to give your readers my method.

We kill our family pork about the last of December, leave it hanging upon the shambles until the next morning after killing, being careful that it does not freeze. It is then cut up, by first taking off the head; 2d, split the hog through the back bone; 3d, take out the lard; 4th, cut the ham and shoulders; 5th, cut off all the flank or belly pieces, (for sausage meat;) 6th, divide the remainder of the side in pieces 6 inches wide. We then cut off the legs from the hams and shoulders, and cut holes in the rinds ready for hanging on the hooks, and place them in a cask, (molasses hogshead if a good one can be procured,) not packed too close, without salt. We then make a strong brine in the following manner; the caldron or some other large kettle being properly cleaned, we put in it about 3 pecks of clean Turks Island salt, to about one barrel of soft water; heat it gradually to boiling point; it is frequently stirred, and all the scum is carefully removed from the surface; it is then dipped out into a barrel or tub, and permitted to cool down to about blood heat; we then add half pound salt-petre, and again stir it well; we then add half a gallon of molasses, well stirred, and immediately put it upon the ham until it is fully covered. A weight is placed upon the meat, so that all in the cask is fully immersed. It is permitted to stand until about the first of March, when it is hung up in the smoke house, from which it is not taken until and only as required for use.

My smoke house is ten by five feet, double boarded side and top, shingle roof, brick floor, and inside laid up with brick about two feet high; in the center of the floor there is a vault about two feet deep, one foot square, laid up in the form of a chimney, the top even with the surface of the floor, in which a shovel full of coals are thrown and then filled with corn cobs; a small cast iron plate covering about two-thirds of the top is thrown over it, which will make a dense smoke for several hours. This is repeated once every day for several days, or until the meat begins to have a brown color, when it is permitted to remain until warm weather; a smoke is then made at least once a week, and in excessive hot weather as often as once in two or three days. I have followed this practice for the last ten years, and have never lost a pound of smoked meat, and have it in September as sweet and clean as in May.

Some may ask why is your smoke house of this length and width? I will briefly state that a farmer has different kinds or grades of meat. 1st, I hang the smoke beef and chops, &c. at the extreme end—2d, the shoulders in the center as they are required to be used first—3rd, the hams on either sides of the shoulders. As to the size, I must say it is none too large, as no one piece should touch the other; and as to the plan and the materials, I have only to say that from experience, I prefer a wood to a brick or stone smoke house, because meat with the foregoing treatment does not mold; and as to its being double boarded all over, is first to prevent flies from having access, and 2d, the immediate action of the atmosphere is prevented by the thickness of it upon the meat; as to the brick sides and floor, the rats and mice are prevented from doing their wonted mischief.

The smoke-beef, chops, &c. may all go in the same cask with the hams, if care is taken to have them well cleansed of blood. The side pork, or summer pork as it is generally termed by farmers, we pack down in layers, upon the edges, around the cask, as close as possible, with good Turks Island salt, about a bushel to a barrel, proportionally divided between the layers; and put one-fourth lb. salt petre, one quart molasses to as much water as will cover a barrel of pork packed as above. I would farther state, we preserve our beef in the same manner as our hams, and preserved in the cask with the same brine. I would also remark, that we in no case use any other tools for cutting up our meat but a good sharp hand saw and knife. EIN LANDSMAN.

Schaghticoke, Oct. 8, 1842.

* The bolts should be screwed into the plank, so that when the brake is attached its edges will exactly fit to the surface the whole length.

MAKING VINEGAR.

WE have on hand a number of pipes of the juice of apples, manufactured last fall, exclusively for vinegar; and since fermentation took place there has been little or no change in regard to the acidity of it, although it has been placed during the winter in the cellar, and in the summer under an open shed exposed to the air.

Is there any process by which it may be rendered more acetous while it remains in the pipes?

What effect would boiling produce, and mixing with it a small quantity of molasses, or some other saccharine substance? S. E. T.

We have never found any difficulty in making good vinegar from cider, when we have drawn it from the lees after the fermentation was wholly over, and placed it in a place where the temperature was higher than it is in the cellar. Left on the lees, or in a low temperature, the acetous fermentation is rarely complete. If our correspondent will place his cider where the temperature is from 65 to 80 degrees, and draw a pailfull daily from each cask, to be returned by the bung hole; or if he will procure from a cask of good vinegar a quantity of the substance called mother of vinegar, and add it to a cask, we think he will soon have vinegar. There are in London extensive vinegar factories managed in this way. The casks are placed on end, and the tops made full of holes. On each is placed a bucket or tub, containing about half a bushel of inferior, or Malaga raisins. A man is constantly employed in passing around the rooms, which are heated to 75 or 80 degrees, drawing a pailfull from the bottom and pouring it upon the raisins, from which it enters the cask. This gives the wine-flavor and body. If the cider is too weak, sugar and a little tartar is added. The vinegar is first rate in a fortnight. Boiling would do no good.—EDS.

PINE APPLE JAM.—Pare your Pines; cut them up in small pieces; add to six pines, 3 lemons, cut in slices; to a pound of fruit, add half a pound of sugar; boil one half hour. S.

The Garden and the Orchard.

THE ROSE BUG ON THE GRAPE.

TO THE EDITORS OF THE CULTIVATOR—I have seen a communication in the "Cultivator," signed "H. W. S. C., Burlington, N. J." describing the injurious effects of the rose bug on the grape vines, the failure of the whale oil soap to destroy them, and asking information of you as to the effect of planting rose bushes near the vines, for the purpose of attracting the bug to the former, and in this way preserving the grape from their depredations. In reply you remark, "we are unable to answer the request of our friend satisfactorily, and hope some of our subscribers acquainted with the fruit, will favor us with the results of their experience in the matter." I am unable to communicate to you any information in regard to the effect of planting rose bushes among the grape vines, not having made the experiment, but will describe the course which I have pursued, and with great success, for the extermination of this troublesome and destructive pest of the vineyard. The labor and expense of planting rose bushes would be very great, and should not be incurred, when other means of accomplishing the same end, successfully, can be resorted to at a very trifling cost.

I have cultivated the grape, particularly the Isabella and Catawba, on a pretty extensive scale, for a number of years, at my vineyards on "Croton Point," near Sing-Sing, N. Y; and among the difficulties and enemies with which I have had to contend, and which experience I may add, has enabled me to overcome, the rose bug has not been the least. Several years since, when my vineyards were smaller than they are at present, I found the rose bug a formidable enemy. They appeared on the vines when they were in blossom, or just as the blossoms were falling off and the young grapes forming, and devoured them with the greatest avidity. This feast continued from eight to twelve days, or till the cherries on the trees in the vicinity began to ripen, when they, with one accord, flew to them for a change of diet, I presume, or from some other cause. I was quite familiar with the habits of the caterpiller, and had been in the practice of clearing them from my orchards in the spring, before they had destroyed scarcely a leaf. This I did not consider a great or difficult matter; for they were enveloped in a web early in the morning, and one man in a few days, was able to clear many hundred trees, by twisting them off web and all, with a bushed pole, and carefully placing them *under his foot*.

The rose bug, however, did not, like the caterpiller, make their appearance in clusters or in webs, but in small numbers at first, and scattered through the vineyards, increasing rapidly every day. Though taken from the vines on the trellis every morning, they continued to multiply till the eighth or twelfth day, when they suddenly left for the cherry trees, as above stated. I was at a loss, at first, to know where they came from, till at length I discovered the ground perforated with numerous holes, through which they made their way to the surface.

I observed when they first appeared on the vines, they were so feeble as to be unable to fly even for a few yards. Having surmounted all other difficulties, I was determined not to be defeated in the vineyard cultivation of the grape, by this insect, and consequently resorted to the following means for their destruction. I directed my men to take each a cup, with a little water in it; and go through the vineyards every morning, removing every bug from the vines; and this was done quite rapidly by passing the cup under the leaf and merely touching it, when the bugs instantly dropped, and were received in the cup containing the water. When the cup was full, they were soon destroyed by pressing the foot upon them on a hard surface. After all of them had been taken off, on the following morning there were ten on the vines were we had found but one; and on the following morning, after having been removed as before, there were one hundred where there were but ten before; and so on. I was not discouraged, however, and directed my men to persevere in the work of destruction, and we should thus, perhaps, prevent the formation of an other progeny for the next season; for it is very easily shown that they do not migrate to any great distance; and by thus destroying the present race, I am convinced that we ensure ourselves from their further depredations to any injurious extent. When a person of some energy has cleared them from his vineyard or garden, he is pretty certain to enjoy the benefit of his labor another season as well as the present, though he may have a few from his less resolute neighbor. Pursuing the course I have mentioned, I very soon lessened the rose bug so much that they gave me very little trouble.

I also tried plowing my vineyards just before winter set in, so as to expose to the weather the insect in the larva state, which will certainly destroy all the young tribe, that have not descended below the reach of the plow. For two years past the number has been so small, that I have omitted this process for their destruction.

Such is a brief account of the course I have pursued for the destruction of the rose bug, and I regret that my professional duties do not allow me leisure to treat on some other subjects, connected with the culture of the grape the present time. Should these observations encourage those who have entered upon the vineyard cultivation of the grape, a fruit that has excited the liveliest interest from the earliest ages of the world, to persevere in this most delightful occupation, until their efforts are crowned with success, as they assuredly will be when they are properly directed, I shall feel that I have not labored in vain. Yours respectfully,

R. T. UNDERHILL, M.D., No. 400 Broadway.

New-York, Sep. 13, 1842.

ROT IN THE RARE-RIPE PEACH.

MESSRS. GAYLORD & TUCKER—Have you or any of your numerous correspondents noticed the *rot* in the *rare-ripe peach*? and can there be any good reason given for the cause of this destruction of this most delicious fruit?

We have a number of trees of this excellent fruit which are great bearers, young and healthy, standing in a good soil, which is well adapted to the peach, and which were *loaded* with fruit the past season; and it also attained a good size. But just before it began to be fit for use, nearly every peach commenced *decaying*; and scarcely a solitary one came to maturity.

As I have a "*peach-tooth*," I was congratulating myself upon a sumptuous repast; but premature decay of these delicacies of nature blasted my anticipation. I have examined scores of them with great care, and am unable to discover the least vestige of an insect. Notwithstanding, I then attributed this mischief to them.

Still, may it not be owing to the superabundance of rain which has fallen this fall? and to the damp, unwholsome state of the atmosphere which has generated disease in the tree, and thus imparted decay to the fruit? Scarcely a tree has escaped in this section; and no one is able to assign for this cause a valid reason.

S. E. T.

We have never observed the disease of the peach of which our correspondent speaks, and as it is noticed by neither Kendrick or McIntosh, we presume the cause to which he ascribes it, is the correct one. Plums, this year, have suffered much from the same cause, and on a fine Magnum Bonum, the fruit of which has rarely failed, standing in our garden, there was hardly a dozen sound ones. Draining, where water exists in the soil to excess, might remedy the evil; but where it depends on the weather, the case is hopeless.—EDS.

LARGE PEAR TREE.—In the last *Magazine of Horticulture*, the Rev. Mr. Beecher of Indianopolis, gives an account of an extraordinary pear tree, on a farm about ten miles north of Vincennes. It is said to have sprung from a seed planted some 25 or 40 years since. It now